This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

Can Doc 10.45.5

HARVARD UNIVERSITY
DEC [illegible] 1941
GRADUATE SCHOOL
OF PUBLIC ADMINISTRATION

Can Doc 10.45.5

HARVARD UNIVERSITY
DEC [illegible] 1941
GRADUATE SCHOOL
OF PUBLIC ADMINISTRATION

REPORT

RETURNS AND STATISTICS

OF THE

INLAND REVENUES

OF THE

DOMINION OF CANADA

FOR THE

FISCAL YEAR ENDED 30th JUNE 1891.

PART I.—EXCISE, &c.

Presented to both Houses of Parliament by Command of His Excellency.

JOHN COSTIGAN,
Minister of Inland Revenue.

OTTAWA:
PRINTED BY S. E. DAWSON, PRINTER TO THE QUEEN'S MOST
EXCELLENT MAJESTY.
1892

[*No.* 6.—1891.] *Price* 20 *cents*

Can Doc 10.45.5

HARVARD UNIVERSITY
DEC 27 1941
GRADUATE SCHOOL
OF PUBLIC ADMINISTRATION

To His Excellency the Right Honourable Lord STANLEY *of* PRESTON, *Governor General of Canada, &c., &c.*

MAY IT PLEASE YOUR EXCELLENCY:

I have the honour to transmit to Your Excellency the RETURNS AND STATISTICS of Inland Revenues of the Dominion of Canada, for the Fiscal Year ended 30th June, 1891, as prepared and laid before me by the Commissioner of Inland Revenue.

All of which is respectfully submitted.

JOHN COSTIGAN,
Minister of Inland Revenue.

CONTENTS.

PAGE.

REPORT of Commissioner of Inland Revenue, for the Fiscal Year ended 30th June, 1891—

FINANCIAL STATEMENT, as detailed below 1-52

STATISTICS, HYDRAULIC RENTS, &c. (Appendix A), as detailed below 53-105

EXPENDITURE, &c. (Appendix B), as detailed below 106-157

INDEX, Alphabetical .... *Vide end.*

FINANCIAL.

No. of Statement.	—	Page.
1	GENERAL REVENUE ACCOUNT—Showing Amount of Revenue accrued and collected from all sources during the year ended 30th June, 1891	3
2	GENERAL EXPENDITURE ACCOUNT—Showing the cost of collecting the above	4-5
3	EXCISE COLLECTION DIVISIONS—In account with Revenue	6-7
4	do do do Expenditure	8 to 11
5	HYDRAULIC RENTS, &c.—Summary Statement of Lessees' Accounts	12
6	BRIDGES, FERRIES, &c.—Lessees, &c., of—In account with Revenue	13
7	CULLING TIMBER—Supervisor and Deputy Supervisors—In account with Revenue	14
8	do do do Expenditure	15
9	BILL STAMPS—Distributors of—In account with Inland Revenue Department	16
10	LAW STAMPS do do do	16
11	SUNDRY MINOR REVENUES	17
12	SUNDRY MINOR EXPENDITURES	17
13	COMPARATIVE STATEMENT of Excisable Articles taken for Consumption, during the years ended 30th June, 1889, 1890 and 1891 respectively	18-19
14	STATEMENTS showing the amounts deposited monthly (by Inland Revenue Officers and others) to the credit of the Honourable the Receiver-General, on account of each of the above Revenues, respectively	20 to 23
15	COMPARATIVE MONTHLY STATEMENT of Excise Revenue accrued—Showing increase or decrease of Revenue yielded by each article, respectively, during each month of the Fiscal Year, as compared with the respective periods of the previous year	24-25
16	REFUNDS—Statement of—Showing names of parties to whom, and under what authority, duties were refunded	26 to 37
17	DEPARTMENTAL EXPENDITURE—Showing Expenditure on account of the Inside Service of the Department	38
18	WEIGHTS AND MEASURES, GAS AND LAW STAMPS—Statement showing Revenue accrued	39
19 (*a*)	do Inspection Divisions—In account with Revenue	40-41
19 (*b*)	do Old do do do	42
20	GAS AND LAW STAMPS—Distributors of—In account with Inland Revenue Department	43-44
21 (*a*)	WEIGHTS AND MEASURES—Inspection Divisions—In account with Expenditure	45-46
21 (*b*)	do Old do do do	47
22	GAS—Inspection Districts—In account with Expenditure	48-49
23	STATEMENT showing the transactions in connection with the manufacture of Methylated Spirits	50
24	STATEMENT showing the Amount Voted, and the Expenditure Authorized, for each Service for 1890-91	51

CONTENTS—*Continued.*

STATISTICS—(APPENDIX A.)

EXCISE.

—	Spirits.	Malt.	Malt Liquor.	Manufactured Tobacco.	Raw Leaf Tobacco.	Canada Twist Tobacco.	Cigars.	Petroleum.	Bonded Manufactures.	Methylated Spirits.
Return of Manufactures—Showing the number of Licenses issued and Fees collected, the materials used, the quantity produced, the amount of duties collected ex-manufactory, and the amount of duties accruing upon excisable articles warehoused..................	54	64	70	72	....	....	82	....	92	....
Comparative Statement of the above, for the years ended 30th June, 1890 and 1891, respectively.	56	65	71	74	....	....	84	....	93	...
Return of Distilleries—Showing their transactions during the year ended 30th June, 1891....	58	....	...	....	....	....	....	....	...	....
Statement showing the transactions in Vinegar in the Bonded Manufactories for the year ended 30th June, 1891..	....	...	....	....	....	...	....	..	94	....
Return of Warehouse Transactions—Showing the quantity of excisable goods remaining in bonded warehouses of each Collection Division, respectively, from previous years; quantity placed in warehouse during fiscal year ended 30th June, 1891; placed in warehouse from other Collection Divisions; also, quantity ex-warehoused for consumption, with duty accrued thereon; ex-warehoused to be re-warehoused in other Collection Divisions; ex-warehoused for exportation; also, quantity used in bonded factories, and remaining in warehouse, 30th June, 1891.	60	66	.. .	77	....	79	86	....	95	....
Comparative Statement of the above, for the years ended 30th June, 1890 and 1891, respectively...............	62	68	...	78	....	80	88	....	96	....
Return of Revenue collected from Canada Twist Tobacco	....	....	....	....	....	81	....	....	....	....
Comparative Statement of the above, for the years ended 30th June, 1890 and 1891, respectively.......	....	....	....	....	....	81	....	..	....	....
Return of Fees for Inspection of Petroleum, for the year ended 30th June, 1891......................	...	...	....	....	...	...	....	90	...	....
Comparative Statement of Petroleum Inspection Fees, for the years ended 30th June, 1890 and 1891, respectively	....	....	..	....	....	....	....	91	....	....
Methylated Spirits—Statement showing the quantity of raw material on hand at beginning of year, raw material used, quantity produced and how disposed of.. ..	....	...	....	....	....	.. .	....	....	....	97

CULLING TIMBER.

No. of Statement.	—	Page.
29	Timber culled at Port of Quebec; description of timber, measurements, rates of Office and Cullers' Fees charged, and Revenue accrued...........	98
30	As above, for Ports of Montreal, Lachine and Sorel..........	100
31	do Port of Three Rivers.	101

HYDRAULIC AND OTHER RENTS.

32	Amount due from each Lessee or Purchaser, 1st July, 1890 .... do accrued during the year ended 30th June, 1891...................... do paid by each Lessee or Purchaser, during the year ended 30th June, 1891 do remaining due by each Lessee or Purchaser on 30th June, 1891.......	102-105

CONTENTS—*Concluded.*

EXPENDITURE—(APPENDIX B.)

—	Inside Service.	Excise.	Culling Timber.	Minor Public Works.	Inspection of Staples.	Weights and Measures.	Gas.	Adulteration of Food.	Hydraulic Rents.
	Page.	Page.	Page.	Page.	Page.	Page.	Page.	Page.	Page.
SALARIES. Paid to each Officer employed in collecting Revenue. SUPERANNUATION. How much deducted from each Officer's salary. CONTINGENCIES. Authorized by the Department for office rent, fuel, &c.	137	106	125	134	134	141	146	135	134

	Page.
Distribution of Seizures	130
List of Persons employed during year ended 30th June, 1891	150
do a portion of the year ended 30th June, 1891	157

REPORT

OF THE

COMMISSIONER OF INLAND REVENUE.

To the Honourable
The Minister of Inland Revenue.

Sir,—Herewith I have the honour to submit statements of the Inland Revenues collected by this Department during the fiscal year ended 30th June, 1891, with the usual information as to the cost of collection and statistics respecting the sources whence those revenues were derived.

The following summary comparison shows the accrued revenue for the years ended 30th June, 1887, 1888, 1889, 1890 and 1891, respectively :—

——	1887.	1888.	1889.	1890.	1891.
	$	$	$	$	$
Excise	6,466.151	6,010,561	6,892,612	7,779,616	*6,825,152
Public Works other than Canals	11,950	13,708	10,457	6,782	14,308
Culling Timber	19,707	15,096	21,416	17,420	20,178
Weights and Measures, Gas and Law Stamps	43,621	46,033	50,034	50,700	45,120
Other Revenues	231	56	21	63	247
	6,541,660	6,085,454	6,974,540	7,854,581	6,905,005
Canal Revenue	436,625	418,945	....	....	....
Total	6,978,285	6,504,399	6,974,540	7,854,581	6,905,005

*This amount includes $38,213 accrued from Methylated Spirits.

The following statement exhibits the details of Excise Revenue accrued during the undermentioned years :—

—	1.	2.	3.	4.	5.
	1887.	1888.	1889.	1890.	1891.
	$	$	$	$	$
Spirits	3,737,339	3,099,016	* 3,874,022	4,620,393	3,546,942
Malt Liquor	7,045	6,997	12,710	13,631	10,495
Malt	433,130	493,030	518,239	556,365	591,399
Cigars	524,281	554,067	563,172	603,473	615,179
Tobacco	1,668,002	1,740,542	1,840,522	1,896,359	1,926,987
Petroleum	31,989	36,569	35,745	39,737	40,407
Manufactures in Bond.	50,005	53,312	28,082	29,610	34,581
Seizures	2,029	13,066	4,880	3,886	2,727
Other Receipts	12,331	13,962	15,240	16,162	18,222
Methylated Spirits	....	....	....	....	38,213
Totals	6,466,151	6,010,561	6,892,612	7,779,616	6,825,152

* This amount exceeds that shown by Statistical Statements Nos. 1 and 4, the reason being that an over-collection of $414.15 was made in Prescott Division, which was afterwards refunded.

The quantity of spirits produced during the year was 4,397,594 proof gallons, as compared with 5,091,475 proof gallons produced in the previous fiscal year. The raw material used in its production being as follows :—

	Lbs.
Malt	3,674,177
Indian corn	56,821,771
Rye	12,070,397
Wheat	23,871
Oats	854,814
Barley	161,884
	73,606,914

The transactions of the several distilleries will be found stated in detail in Appendix A (Statement No. 3).

	Proof Gallons.
There were on the 1st July, 1890, in process of manufacture	* 170,703
Manufactured during the fiscal year	4,397,594
Returned to distilleries for redistillation	159,140
Received into distilleries from other sources, duty paid	18,117
	4,745,554

This includes 688·26 gallons, excess found in process, in Prescott Division.

These were disposed of as follows :—

Placed in warehouse under Crown lock	4,570,564
Fusel oil extracted by redistillation	17,427
Deficiency arising from rectification	42,086
Remaining in process of manufacture, 30th June, 1891, by actual stock-taking	115,477
	4,745,554

The following Statement shows the warehousing transactions in spirits during the year ended 30th June, 1891, and the four preceding years :—

Fiscal Year	1 In Warehouse at beginning of Year.	2 Warehoused during the Year. Ex-Distillery.	3 Otherwise Warehoused.	4 Taken for Consumption.	5 Exported.	6 Used in Bonded Factories.	7 Otherwise Accounted for.	8 For Re-distillation.	9 In Warehouse at end of year.
	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.
1886-87	2,832,473	4,890,187	15,442	2,864,935	4,597	301,503	3,090	....	4,563,977
1887-88	4,563,977	5,649,632	44,609	2,326,327	7,889	335,785	49,672	115,337	7,423,208
1888-89	7,423,208	5,915,673	16,769	2,960,447	8,731	218,142	103,924	116,224	9,948,182
1889-90	9,948,182	5,136,688	31,015	3,521,194	12,003	254,666	74,518	154,325	11,099,179
Totals	24,767,840	21.592,180	107,835	11,672,903	33,220	1,110,096	231.204	385,886	33,034,546
Annual Average of four years ended June 30, 1890	6,191,960	5,398,045	26,959	2,918,226	8,305	277,524	57,801	96,471	8,258,636
1890-91	11,099,179	4,570,724	51,740	2,687,664	20,497	325,235	113,321	159,140	12,415,786

The quantity entered for consumption was 2,687,664 proof gallons as against 3,521,194 gallons during the preceding year. By reference to my report of that year it will be seen that the abnormal increase for the then current year was fully explained by the withdrawal from bond of large quantities prior to the 1st of July, 1890, when the requirement as to maturing came into full force.

The quantity held in stock on 1st July, 1891, was 12,415,786 proof gallons, the largest quantity ever held by the distillers of Canada, the production, however, decreased to the extent of nearly three quarters of a million gallons.

The following statement exhibits the entire quantities upon which duties were collected during the several years recited therein. The total column will be found to accord with the figures shown in Financial Statement No. 13 :—

Fiscal Year.	Canadian Spirits		Imported Spirits used in Bonded Factories. Paid difference between Customs and Excise Duty.	Total Quantity upon which Duty was Collected	Memorandum of Revenue accrued including License Fees.
	Paid duty. Ex-Distillery.	Paid duty. Ex-Warehouse			
	Pf. Gallons.	Pf. Gallons.	Pf. Gallons.	Pf. Gallons.	$
1886-87	1,904	2,864,935	15,426	2,882,265	3,737,338
1887-88	46,505	2,326,327	32,884	2,405,716	3,099,016
1888-89	12,485	2,945,124	15,322	2,972,931	3,873,607
1889-90	22,590	3,521,339	30,870	3,574,799	4,620,393
Totals	83,484	11,657,725	94,502	11,835,711	15,330,354
Annual average of four years ended June 30, 1890	20,871	2,914,431	23,625	2,958,928	3,832,588
1890-91	21,177	2,636,132	51,532	2,708,841	3,546,941

Appendix A shows the consumption per head of the population, of spirits, tobacco and other goods subject to Excise, and similar goods subject to Customs.

MALT:

The following statement shows the transactions in Malt during the year 1890-91, and the four years preceding :—

Fiscal Year.	1. In Warehouse at beginning of year.	2. Manufactured during the Year.	3. Taken for Consumption.	4. Exported.	5. Otherwise Accounted for.	6. In Warehouse at end of year.	7. Memorandum of Revenue accrued, including License Fees.
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	$
1886-87............	14,807,457	54,662,804	42,630,440	6,064,360	505,077	20,270,384	440,175
1887-88	20,270,384	54,282,943	48,640,467	5,470,338	671,923	19,770,599	500,027
1888-89...........	19,770,599	60,500,427	51,111,429	3,339,627	1,055,348	24,764,622	530,949
1889-90.............	24,764,622	64,314,257	54,974,013	5,471,737	2,034,125	26,599,004	556,365
Totals...........	79,613,062	233,760,431	197,356,349	20,346,062	4,266,473	91,404,609	2,027,516
Annual average of four years ended 30th June, 1890...............	19,903,265	58,440,108	49,339,087	5,086,515	1,066,618	22,851,152	506,879
1890-91	26,599,004	52,999,874	57,909,201	3,333,633	1,025,725	17,330,319	591,399

The revenue from Malt has increased some $35,000 as compared with the revenue of the preceding year, and some $85,000 as compared with the average revenue of the preceding four years. Of the quantity entered for consumption 52,335,914 lbs. were used, together with 47,816 lbs. of sugar, syrup, &c., in the production of 18,069,183 gallons of beer, being an average of 2·89 lbs. of Malt per gallon.

TOBACCO:

The following table exhibits the transactions during the Fiscal Year in Tobacco, Snuff and Cigarettes :—

Fiscal Year.	1. In Warehouse 1st July.	2. Manufactured during the Year.	3. Taken for Consumption.	4. Exported.	5. Otherwise Accounted for.	6. In Warehouse 30th June.	7. Raw Leaf taken for Consumption. Canadian.	7. Raw Leaf taken for Consumption. Foreign.	8. Total Tobacco taken for Consumption.	9. Duty Collected thereon including License Fees
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	$
1886-87	1,612,409	9,114,944	8,816,573	93,930	25,262	1,791,588	....	20	8,816,593	1,668,002
1887-88	1,791,588	10,608,026	9,248,034	87,720	39,455	3,024,405	....	....	9,248,034	1,740,542
1888-89	3,024,405	9,003,065	9,749,213	110,574	53,422	2,114,261	....	20	9,749,233	1,840,522
1889-90	2,114,261	10,260,275	9,875,337	146,259	87,762	2,265,178	....	90	9,875,427	1,896,359
Totals	8,542,663	38,986,310	37,689,157	438,483	205,901	9,195,432	....	130	37,689,287	7,145,425
Average for four years ended 30th June, 1890	2,135,666	9,746,577	9,422,289	109,621	51,475	2,298,858	....	32	9,422,322	1,786,356
1890-91	2,265,178	9,947,650	9,778,708	107,956	102,553	2,223,611	....	101	9,778,809	1,926,987

The following is a statement of Canadian tobacco taken for use during the last five years :—

Fiscal Year.	Leaf and Twist paid duty.	Taken for use in Manufactories,	Total.
	Lbs.	Lbs.	Lbs.
1886-87	91,593	426,223	517,816
1887-88	77,104	599,231	676,335
1888-89	74,071	711,334	785,405
1889-90	79,518	602,095	681,613
1890-91	84,624	301,097	385,721

The following statement shows the quantity of Canadian roll tobacco which paid duty, and the divisions within which such duty was collected. The quantities shown are included in the foregoing statement (column 3) :—

DIVISIONS.	LICENSES.		Tobacco paid Duty during Year ended 30th June, 1891.	Duty Collected, including License Fees.
	No.	Amount.		
		$ cts.	Lbs.	$ cts.
Cornwall	1	2 00	440	24 00
Ottawa	4	8 00	597	37 85
Windsor	1	2 00	350	19 50
Joliette	52	104 00	51,762¼	2,692 11
Montreal	44	88 00	19,335½	1,054 77
Terrebonne	44	88 00	12,139¼	694 97
Total	146	292 00	84,624	4,523 20
Total for previous year	127	254 00	79,518½	4,229 93

The following statement shows the transactions in Cigars during the fiscal year ended 30th June, 1891, and the four years preceding:—

Fiscal Year.	1. In Warehouse 1st July.	2. Manufactured during the Year.	3. Assessment to bring production up to Standard.	4. Taken for Consumption.	5. Exported.	6. Otherwise Accounted for.	7. In Warehouse 30th June.	8. Memorandum of Revenue accrued including License Fees.
	No.	No.	No.	No.	No.	No.	No.	$
1886-87	8,746,625	85,587,505	222,223	85,971,823	33,475	45,250	8,505,805	524,281
1887-88	8,505,805	93,098,838	47,685	90,783,558	59,500	....	10,809,270	554,067
1888-89	10,809,270	92,590,012	11,388	92,599,820	17,675	....	10,793,175	563,172
1889-90	10,793,175	100,311,140	165,392	98,976,117	124,550	11,800	12,157,240	603,473
Totals	38,854,875	371,587,495	446,688	368,331,318	235,200	57,050	42,265,490	2,244,993
Annual average of four years ended 30th June, 1890	9,713,719	92,896,874	111,672	92,082,829	58,800	14,262	10,566,372	561,248
1890-91	12,157,240	100,081,550	25,401	101,142,481	178,775	29,985	10,912,950	615,180

The revenue derived from goods manufactured in bond during the past five years has been as follows :—

1886–87	$50,005
1887–88	53,312
1888–89	28,082
1889–90	29,610
1890–91	34,581

INSPECTION OF PETROLEUM :

The number of packages of Canadian petroleum inspected during the year is 280,078, and the fees collected thereon $24,981.22.

The number of imported, inspected by officers of the Department, is 108,631, and the fees collected thereon $15,425.98.

PUBLIC WORKS :

The revenue from this source was as follows :—

	1889–90	1890–91
Hydraulic and other Rents	$3,138	$ 3,721
Minor Public Works	3,644	10,587

CULLING TIMBER :

The amount accrued upon culling of timber was, during 1889–90, $20,177.75, the cost of the service having been $28,599.75.

WEIGHTS AND MEASURES AND GAS :

The usual special reports in relation to these services have been prepared, containing full statistical information.

The revenue accrued from these services and from law stamps of the Supreme and Exchequer Courts was $45,120.88.

PREVENTION OF ADULTERATION OF FOOD AND AGRICULTURAL FERTILIZERS :

The usual supplementary report in relation to this service will be submitted, containing details of the work done and the reports of the analysts.

INSPECTION OF STAPLES :

The usual statistics in relation to this service will be found in Appendices 𝕭 and 𝕮.

METHYLATED SPIRITS :

The quanity of methylated spirits manufactured during the year was 124,783 proof gallons ; 123,472 gallons were sold. A statement of details appears on pages 50 and 97.

Appendix 𝕯 contains, as usual, the details concerning illicit stills seized during the year.

An addition has been made to this report by the introduction of Appendix 𝕰, containing the amount of Excise Revenue collected at each Out Office.

I have the honour to be, Sir,
Your obedient servant,
E. MIALL,
Commissioner.

APPENDIX A.

Table showing the Annual Consumption per head of the undermentioned Articles paying Excise or Customs Duties, and the Revenue per head derived annually.

Years.	Dominion of Canada.									
	Quantity.					Duty.				
	Spirits.	Beer.	Wine.	Tobacco.	Petroleum	Spirits.	Beer.	Wine.	Tobacco.	Petroleum
	Galls.	Galls.	Galls.	Lbs.	Galls.	$	$	$	$	$
1867	1·621	1·973	·098	1·815	......	......	......	......	......	......
1868	1·604	2·269	·174	1·738	·193	1·028	·097	·043	·176	·014
1869	1·124	2·290	·115	1·755	·575	·761	·092	·037	·193	·041
1870	1·434	2·163	·195	2·190	1·103	·962	·085	·049	·259	·061
1871	1·578	2·490	·259	2·052	1·591	1·059	·095	·056	·336	·077
1872	1·723	2·774	·257	2·481	1·302	1·160	·108	·070	·422	·076
1873	1·682	3·188	·238	1·999	1·387	1·135	·120	·066	·350	·084
1874	1·994	3·012	·288	2·566	1·618	1·363	·119	·086	·442	·103
1875	1·394	3·091	·149	1·915	1·589	1·127	·114	·069	·428	·098
1876	1·204	2·454	·177	2·316	1·360	1·182	·098	·075	·513	·105
1877	·975	2·322	·096	2·051	1·103	·949	·109	·057	·446	·084
1878	·960	2·169	·096	1·976	......	·927	·147	·052	·439	...
1879	1·131	2·209	·104	1·954	......	1·095	·125	·057	·449	......
1880	·715	2·248	·077	1·936	......	·772	·081	·055	·428	......
1881	·922	2·293	·099	2·035	......	·990	·081	·073	·443	......
1882	1·009	2·747	·120	2·150	......	1·084	·098	·092	·485	......
1883	1·090	2·882	·135	2·280	......	1·186	·103	·097	·473	......
1884	·998	2·924	·117	2·476	......	1·074	·104	·082	·365	......
1885	1·126	2·639	·109	2·623	......	1·198	·111	·074	·393	......
1886	·711	2·839	·110	2·052	......	1·007	·091	·074	·502	......
1887	·746	3·084	·095	2·062	......	1·045	·100	·066	·514	......
1888	·645	3·247	·094	2·093	......	·944	·110	·066	·509	......
1889	·776	3·263	·097	2·153	......	1·107	·114	·068	·529	......
1890	·883	3·360	·104	2·143	......	1·257	·121	·072	·539	......
1891	·743	3·790	·111	2·295	......	1·094	·137	·080	·590	......
Average	1·151	2·708	·140	2·128	......	1·062	·106	·067	·426	......

Inland Revenue Department,
Ottawa, 17th August, 1891.

E. MIALL,
Commissioner.

APPENDIX B.

List of Inspectors and Deputy Inspectors of Staple Articles of Canadian Commerce who are empowered to act under the Inspection Act, Revised Statutes, chap. 99, and amending Acts, made up to the 30th June, 1891; also showing the District for which they are appointed, and the Territory comprised in each District.

District.	Territory comprising District.	Date of Order in Council.	Articles.	Name.	Office.	Residence.
Ontario.						
Brant and Haldimand	Counties of Brant and Haldimand	Sept. 27, 1873	Leather and raw hides.	Wm. G. Culbard	Inspector	Paris.
Bruce and Grey	do Bruce and Grey	do	Fish and fish oils			
do	do do	do	do	John Campbell	Dep. Inspector	Kincardine.
do	do do	do	do	Geo. S. Miller	do	Owen Sound.
Carleton and Russell	do Carleton and Russell	do				
Essex, Kent and Lambton	do Essex, Kent and Lambton	do	Leather and raw hides.	Richard Linton	Inspector	Chatham.
do do	do do do	do	do	Jos. W. Barringer	Dep. Inspector	Windsor.
Frontenac, Leeds and Addington	do Frontenac, Leeds and Addington	do				
Grenville, Dundas and Stormont	do Grenville, Dundas and Stormont	do				
Glengarry and Prescott	do Glengarry and Prescott	do	Leather and raw hides.			
Hamilton	All that territory lying south of the main line of the Grand Trunk Railway (not incorporated in the Division of Toronto) and east of the Port Dover and Lake Huron Railway	Nov. 10, 1885	Wheat and other grain.	Edward Adamson	Inspector	Hamilton.
do	City of Hamilton	Aug. 29, 1873	Leather and raw hides.	James Brown	do	do
Kingston	Comprising all that portion of Ontario lying west of Kingston and Pembroke Railway, and east of the eastern boundaries of the Counties of Ontario, Muskoka and Parry Sound	Nov. 10, 1885	Wheat and other grain.	Wm. Bletcher	do	Port Hope.
do	City of Kingston	Aug. 29, 1873	Leather and raw hides.	Peter McKim	do	Kingston.
Lanark and Renfrew	Counties of Lanark and Renfrew	Sept. 27, 1873	Beef and pork	Wm. Gardner	do	Dalhousie.
Lennox and Prince Edward	do Lennox and Prince Edward	do				
Lincoln and Welland	do Lincoln and Welland	do	Leather and raw hides.	Michael Cairns	Inspector	St. Catharines.

The following statement shows the transactions in Cigars during the fiscal year ended 30th June, 1891, and the four years preceding:—

Fiscal Year.	1. In Warehouse 1st July.	2. Manufactured during the Year.	3. Assessment to bring production up to Standard.	4. Taken for Consumption.	5. Exported.	6. Otherwise Accounted for.	7. In Warehouse 30th June.	8. Memorandum of Revenue accrued including License Fees.
	No.	No.	No.	No.	No.	No.	No.	$
1886-87	8,746,625	85,587,505	222,223	85,971,823	33,475	45,250	8,505,805	524,281
1887-88	8,505,805	93,098,838	47,685	90,783,558	59,500	....	10,809,270	554,067
1888-89	10,809,270	92,590,012	11,388	92,599,820	17,675	....	10,793,175	563,172
1889-90	10,793,175	100,311,140	165,392	98,976,117	124,550	11,800	12,157,240	603,473
Totals	38,854,875	371,587,495	446,688	368,331,318	235,200	57,050	42,265,490	2,244,993
Annual average of four years ended 30th June, 1890	9,713,719	92,896,874	111,672	92,082,829	58,800	14,262	10,566,372	561,248
1890-91	12,157,240	100,081,550	25,401	101,142,481	178,775	29,985	10,912,950	615,180

The revenue derived from goods manufactured in bond during the past five years has been as follows :—

1886-87	$50,005
1887-88	53,312
1888-89	28,082
1889-90	29,610
1890-91	34,581

INSPECTION OF PETROLEUM :

The number of packages of Canadian petroleum inspected during the year is 280,078, and the fees collected thereon $24,981.22.

The number of imported, inspected by officers of the Department, is 108,631, and the fees collected thereon $15,425.98.

PUBLIC WORKS :

The revenue from this source was as follows :—

	1889-90	1890-91
Hydraulic and other Rents	$3,138	$ 3,721
Minor Public Works	3,644	10,587

CULLING TIMBER :

The amount accrued upon culling of timber was, during 1889-90, $20,177.75, the cost of the service having been $28,599.75.

WEIGHTS AND MEASURES AND GAS :

The usual special reports in relation to these services have been prepared, containing full statistical information.

The revenue accrued from these services and from law stamps of the Supreme and Exchequer Courts was $45,120.88.

PREVENTION OF ADULTERATION OF FOOD AND AGRICULTURAL FERTILIZERS :

The usual supplementary report in relation to this service will be submitted, containing details of the work done and the reports of the analysts.

INSPECTION OF STAPLES :

The usual statistics in relation to this service will be found in Appendices 𝕭 and 𝕮.

METHYLATED SPIRITS :

The quanity of methylated spirits manufactured during the year was 124,783 proof gallons ; 123,472 gallons were sold. A statement of details appears on pages 50 and 97.

Appendix 𝕯 contains, as usual, the details concerning illicit stills seized during the year.

An addition has been made to this report by the introduction of Appendix 𝕰, containing the amount of Excise Revenue collected at each Out Office.

I have the honour to be, Sir,
Your obedient servant,
E. MIALL,
Commissioner.

REPORT

OF THE

COMMISSIONER OF INLAND REVENUE.

To the Honourable
The Minister of Inland Revenue.

Sir,—Herewith I have the honour to submit statements of the Inland Revenues collected by this Department during the fiscal year ended 30th June, 1891, with the usual information as to the cost of collection and statistics respecting the sources whence those revenues were derived.

The following summary comparison shows the accrued revenue for the years ended 30th June, 1887, 1888, 1889, 1890 and 1891, respectively :—

——	1887.	1888.	1889.	1890.	1891.
	$	$	$	$	$
Excise	6,466.151	6,010,561	6,892,612	7,779,616	*6,825,152
Public Works other than Canals	11,950	13,708	10,457	6,782	14,308
Culling Timber	19,707	15,096	21,416	17,420	20,178
Weights and Measures, Gas and Law Stamps	43,621	46,033	50,034	50,700	45,120
Other Revenues	231	56	21	63	247
	6,541,660	6,085,454	6,974,540	7,854,581	6,905,005
Canal Revenue	436,625	418,945	... .	....	....
Total	6,978,285	6,504,399	6,974,540	7,854,581	6,905,005

*This amount includes $38,213 accrued from Methylated Spirits.

The following statement exhibits the details of Excise Revenue accrued during the undermentioned years:—

—	1.	2.	3.	4.	5.
	1887.	1888.	1889.	1890.	1891.
	$	$	$	$	$
Spirits	3,737,339	3,099,016	* 3,874,022	4,620,393	3,546,942
Malt Liquor	7,045	6,997	12,710	13,631	10,495
Malt	433,130	493,030	518,239	556,365	591,399
Cigars	524,281	554,067	563,172	603,473	615,179
Tobacco	1,668,002	1,740,542	1,840,522	1,896,359	1,926,987
Petroleum	31,989	36,569	35,745	39,737	40,407
Manufactures in Bond	50,005	53,312	28,082	29,610	34,581
Seizures	2,029	13,066	4,880	3,886	2,727
Other Receipts	12,331	13,962	15,240	16,162	18,222
Methylated Spirits	....	....	....	....	38,213
Totals	6,466,151	6,010,561	6,892,612	7,779,616	6,825,152

* This amount exceeds that shown by Statistical Statements Nos. 1 and 4, the reason being that an over-collection of $414.15 was made in Prescott Division, which was afterwards refunded.

The quantity of spirits produced during the year was 4,397,594 proof gallons, as compared with 5,091,475 proof gallons produced in the previous fiscal year. The raw material used in its production being as follows:—

	Lbs.
Malt	3,674,177
Indian corn	56,821,771
Rye	12,070,397
Wheat	23,871
Oats	854,814
Barley	161,884
	73,606,914

The transactions of the several distilleries will be found stated in detail in Appendix A (Statement No. 3).

	Proof Gallons.
There were on the 1st July, 1890, in process of manufacture	* 170,703
Manufactured during the fiscal year	4,397,594
Returned to distilleries for redistillation	159,140
Received into distilleries from other sources, duty paid	18,117
	4,745,554

This includes 688·26 gallons, excess found in process, in Prescott Division.

These were disposed of as follows :—

Placed in warehouse under Crown lock	4,570,564
Fusel oil extracted by redistillation	17,427
Deficiency arising from rectification	42,086
Remaining in process of manufacture, 30th June, 1891, by actual stock-taking	115,477
	4,745,554

The following Statement shows the warehousing transactions in spirits during the year ended 30th June, 1891, and the four preceding years :—

Fiscal Year	1	2	3	4	5	6	7	8	9
	In Warehouse at beginning of Year.	Warehoused during the Year. Ex-Distillery.	Otherwise Warehoused.	Taken for Consumption.	Exported.	Used in Bonded Factories.	Otherwise Accounted for.	For Re-distillation.	In Warehouse at end of year.
	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.
1886-87	2,832,473	4,890,187	15,442	2,864,935	4,597	301,503	3,090	....	4,563,977
1887-88	4,563,977	5,649,632	44,609	2,326,327	7,889	335,785	49,672	115,337	7,423,208
1888-89	7,423,208	5,915,673	16,769	2,960,447	8,731	218,142	103,924	116,224	9,948,182
1889-90	9,948,182	5,136,688	31,015	3,521,194	12,003	254,666	74,518	154,325	11,099,179
Totals	24,767,840	21.592,180	107,835	11,672,903	33,220	1,110,096	231.204	385,886	33,034,546
Annual Average of four years ended June 30, 1890	6,191,960	5,398,045	26,959	2,918,226	8,305	277,524	57,801	96,471	8,258,636
1890-91	11,099,179	4,570,724	51,740	2,687,664	20,497	325,235	113,321	159,140	12,415,786

The quantity entered for consumption was 2,687,664 proof gallons as against 3,521,194 gallons during the preceding year. By reference to my report of that year it will be seen that the abnormal increase for the then current year was fully explained by the withdrawal from bond of large quantities prior to the 1st of July, 1890, when the requirement as to maturing came into full force.

The quantity held in stock on 1st July, 1891, was 12,415,786 proof gallons, the largest quantity ever held by the distillers of Canada, the production, however, decreased to the extent of nearly three quarters of a million gallons.

The following statement exhibits the entire quantities upon which duties were collected during the several years recited therein. The total column will be found to accord with the figures shown in Financial Statement No. 13 :—

Fiscal Year.	Canadian Spirits		Imported Spirits used in Bonded Factories. Paid difierence between Customs and Excise Duty.	Total Quantity upon which Duty was Collected	Memorandum of Revenue accrued including License Fees.
	Paid duty. Ex-Distillery.	Paid duty. Ex-Warehouse			
	Pf. Gallons.	Pf. Gallons.	Pf. Gallons.	Pf. Gallons.	$
1886-87	1,904	2,864,935	15,426	2,882,265	3,737,338
1887-88	46,505	2,326,327	32,884	2,405,716	3,099,016
1888-89	12,485	2,945,124	15,322	2,972,931	3,873,607
1889-90	22,590	3,521,339	30,870	3,574,799	4,620,393
Totals	83,484	11,657,725	94,502	11,835,711	15,330,354
Annual average of four years ended June 30, 1890	20,871	2,914,431	23,625	2,958,928	3,832,588
1890-91	21,177	2,636,132	51,532	2,708,841	3,546,941

Appendix 𝔄 shows the consumption per head of the population, of spirits, tobacco and other goods subject to Excise, and similar goods subject to Customs.

MALT:

The following statement shows the transactions in Malt during the year 1890-91, and the four years preceding :—

Fiscal Year.	1. In Warehouse at beginning of year.	2. Manufactured during the Year.	3. Taken for Consumption.	4. Exported.	5. Otherwise Accounted for.	6. In Warehouse at end of year.	7. Memorandum of Revenue accrued, including License Fees.
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	$
1886-87	14,807,457	54,662,804	42,630,440	6,064,360	505,077	20,270,384	440,175
1887-88	20,270,384	54,282,943	48,640,467	5,470,338	671,923	19,770,599	500,027
1888-89	19,770,599	60,500,427	51,111,429	3,339,627	1,055,348	24,764,622	530,949
1889-90	24,764,622	64,314,257	54,974,013	5,471,737	2,034,125	26,599,004	556,365
Totals	79,613,062	233,760,431	197,356,349	20,346,062	4,266,473	91,404,609	2,027,516
Annual average of four years ended 30th June, 1890	19,903,265	58,440,108	49,339,087	5,086,515	1,066,618	22,851,152	506,879
1890-91	26,599,004	52,999,874	57,909,201	3,333,633	1,025,725	17,330,319	591,399

The revenue from Malt has increased some $35,000 as compared with the revenue of the preceding year, and some $85,000 as compared with the average revenue of the preceding four years. Of the quantity entered for consumption 52,335,914 lbs. were used, together with 47,816 lbs. of sugar, syrup, &c., in the production of 18,069,183 gallons of beer, being an average of 2·89 lbs. of Malt per gallon.

TOBACCO:

The following table exhibits the transactions during the Fiscal Year in Tobacco, Snuff and Cigarettes:—

Fiscal Year.	1. In Warehouse 1st July.	2. Manufactured during the Year.	3. Taken for Consumption.	4. Exported.	5. Otherwise Accounted for.	6. In Warehouse 30th June.	7. Raw Leaf taken for Consumption.		8. Total Tobacco taken for Consumption.	9. Duty Collected thereon including License Fees
							Canadian.	Foreign.		
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	$
1886-87	1,612,409	9,114,944	8,816,573	93,930	25,262	1,791,588	....	20	8,816,593	1,668,002
1887-88	1,791,588	10,608,026	9,248,034	87,720	39,455	3,024,405	....	....	9,248,034	1,740,542
1888-89	3,024,405	9,003,065	9,749,213	110,574	53,422	2,114,261	....	20	9,749,233	1,840,522
1889-90	2,114,261	10,260,275	9,875,337	146,259	87,762	2,265,178	....	90	9,875,427	1,896,359
Totals	8,542,663	38,986,310	37,689,157	438,483	205,901	9,195,432	.....	130	37,689,287	7,145,425
Average for four years ended 30th June, 1890	2,135,666	9,746,577	9,422,289	109,621	51,475	2,298,858	....	32	9,422,322	1,786,356
1890-91	2,265,178	9,947,650	9,778,708	107,956	102,553	2,223,611	....	101	9,778,809	1,926,987

The following is a statement of Canadian tobacco taken for use during the last five years :—

Fiscal Year.	Leaf and Twist paid duty.	Taken for use in Manufactories.	Total.
	Lbs.	Lbs.	Lbs.
1886-87	91,593	426,223	517,816
1887-88	77,104	599,231	676,335
1888-89	74,071	711,334	785,405
1889-90	79,518	602,095	681,613
1890-91	84,624	301,097	385,721

The following statement shows the quantity of Canadian roll tobacco which paid duty, and the divisions within which such duty was collected. The quantities shown are included in the foregoing statement (column 3) :—

Divisions.	Licenses.		Tobacco paid Duty during Year ended 30th June, 1891.	Duty Collected, including License Fees.
	No.	Amount.		
		$ cts.	Lbs.	$ cts.
Cornwall	1	2 00	440	24 00
Ottawa	4	8 00	597	37 85
Windsor	1	2 00	350	19 50
Joliette	52	104 00	51,762¼	2,692 11
Montreal	44	88 00	19,335½	1,054 77
Terrebonne	44	88 00	12,139¼	694 97
Total	146	292 00	84,624	4,523 20
Total for previous year	127	254 00	79,518½	4,229 93

The following statement shows the transactions in Cigars during the fiscal year ended 30th June, 1891, and the four years preceding:—

Fiscal Year.	1. In Warehouse 1st July.	2. Manufactured during the Year.	3. Assessment to bring production up to Standard.	4. Taken for Consumption.	5. Exported.	6. Otherwise Accounted for.	7. In Warehouse 30th June.	8. Memorandum of Revenue accrued including License Fees.
	No.	No.	No.	No.	No.	No.	No.	$
1886-87	8,746,625	85,587,505	222,223	85,971,823	33,475	45,250	8,505,805	524,281
1887-88	8,505,805	93,098,838	47,685	90,783,558	59,500	....	10,809,270	554,067
1888-89	10,809,270	92,590,012	11,388	92,599,820	17,675	....	10,793,175	563,172
1889-90	10,793,175	100,311,140	165,392	98,976,117	124,550	11,800	12,157,240	603,473
Totals	38,854,875	371,587,495	446,688	368,331,318	235,200	57,050	42,265,490	2,244,993
Annual average of four years ended 30th June, 1890	9,713,719	92,896,874	111,672	92,082,829	58,800	14,262	10,566,372	561,248
1890-91	12,157,240	100,081,550	25,401	101,142,481	178,775	29,985	10,912,950	615,180

The revenue derived from goods manufactured in bond during the past five years has been as follows :—

1886-87	$50,005
1887-88	53,312
1888-89	28,082
1889-90	29,610
1890-91	34,581

INSPECTION OF PETROLEUM :

The number of packages of Canadian petroleum inspected during the year is 280,078, and the fees collected thereon $24,981.22.

The number of imported, inspected by officers of the Department, is 108,631, and the fees collected thereon $15,425.98.

PUBLIC WORKS :

The revenue from this source was as follows :—

	1889-90	1890-91
Hydraulic and other Rents	$3,138	$ 3,721
Minor Public Works	3,644	10,587

CULLING TIMBER :

The amount accrued upon culling of timber was, during 1889-90, $20,177.75, the cost of the service having been $28,599.75.

WEIGHTS AND MEASURES AND GAS :

The usual special reports in relation to these services have been prepared, containing full statistical information.

The revenue accrued from these services and from law stamps of the Supreme and Exchequer Courts was $45,120.88.

PREVENTION OF ADULTERATION OF FOOD AND AGRICULTURAL FERTILIZERS :

The usual supplementary report in relation to this service will be submitted, containing details of the work done and the reports of the analysts.

INSPECTION OF STAPLES :

The usual statistics in relation to this service will be found in Appendices B and C.

METHYLATED SPIRITS :

The quanity of methylated spirits manufactured during the year was 124,783 proof gallons ; 123,472 gallons were sold. A statement of details appears on pages 50 and 97.

Appendix D contains, as usual, the details concerning illicit stills seized during the year.

An addition has been made to this report by the introduction of Appendix E, containing the amount of Excise Revenue collected at each Out Office.

I have the honour to be, Sir,
Your obedient servant,
E. MIALL,
Commissioner.

APPENDIX A.

Table showing the Annual Consumption per head of the undermentioned Articles paying Excise or Customs Duties, and the Revenue per head derived annually.

Years.	Dominion of Canada.									
	Quantity.					Duty.				
	Spirits.	Beer.	Wine.	Tobacco.	Petroleum	Spirits.	Beer.	Wine.	Tobacco.	Petroleum
	Galls.	Galls.	Galls.	Lbs.	Galls.	$	$	$	$	$
1867	1·621	1·973	·098	1·815	......	......	......	......	......	......
1868	1·604	2·269	·174	1·738	·193	1·028	·097	·043	·176	·014
1869	1·124	2·290	·115	1·755	·575	·761	·092	·037	·193	·041
1870	1·434	2·163	·195	2·190	1·103	·962	·085	·049	·259	·061
1871	1·578	2·490	·259	2·052	1·591	1·059	·095	·056	·336	·077
1872	1·723	2·774	·257	2·481	1·302	1·160	·108	·070	·422	·076
1873	1·682	3·188	·238	1·999	1·387	1·135	·120	·066	·350	·084
1874	1·994	3·012	·288	2·566	1·618	1·363	·119	·086	·442	·103
1875	1·394	3·091	·149	1·915	1·589	1·127	·114	·069	·428	·098
1876	1·204	2·454	·177	2·316	1·360	1·182	·098	·075	·513	·105
1877	·975	2·322	·096	2·051	1·103	·949	·109	·057	·446	·084
1878	·960	2·169	·096	1·976	......	·927	·147	·052	·439	...
1879	1·131	2·209	·104	1·954	......	1·095	·125	·057	·449	......
1880	·715	2·248	·077	1·936	......	·772	·081	·055	·428	......
1881	·922	2·293	·099	2·035	......	·990	·081	·073	·443	......
1882	1·009	2·747	·120	2·150	......	1·084	·098	·092	·485	......
1883	1·090	2·882	·135	2·280	......	1·186	·103	·097	·473	......
1884	·998	2·924	·117	2·476	......	1·074	·104	·082	·365	......
1885	1·126	2·639	·109	2·623	......	1·198	·111	·074	·393	......
1886	·711	2·839	·110	2·052	......	1·007	·091	·074	·502	......
1887	·746	3·084	·095	2·062	......	1·045	·100	·066	·514	......
1888	·645	3·247	·094	2·093	......	·944	·110	·066	·509	......
1889	·776	3·263	·097	2·153	......	1·107	·114	·068	·529	......
1890	·883	3·360	·104	2·143	......	1·257	·121	·072	·539	......
1891	·743	3·790	·111	2·295	......	1·094	·137	·080	·590	......
Average	1·151	2·708	·140	2·128	......	1·062	·106	·067	·426	......

Inland Revenue Department,
Ottawa, 17th August, 1891.

E. MIALL,
Commissioner.

APPENDIX B.

LIST of Inspectors and Deputy Inspectors of Staple Articles of Canadian Commerce who are empowered to act under the Inspection Act, Revised Statutes, chap. 99, and amending Acts, made up to the 30th June, 1891; also showing the District for which they are appointed, and the Territory comprised in each District.

District.	Territory comprising District.	Date of Order in Council.	Articles.	Name.	Office.	Residence.
Ontario.						
Brant and Haldimand	Counties of Brant and Haldimand	Sept. 27, 1873	Leather and raw hides	Wm. G. Culbard	Inspector	Paris.
Bruce and Grey	do Bruce and Grey	do	Fish and fish oils			
do	do do	do	do	John Campbell	Dep. Inspector	Kincardine.
do	do do	do	do	Geo. S. Miller	do	Owen Sound.
Carleton and Russell	do Carleton and Russell	do				
Essex, Kent and Lambton	do Essex, Kent and Lambton	do	Leather and raw hides	Richard Linton	Inspector	Chatham.
do do	do do do	do	do	Jos. W. Barringer	Dep. Inspector	Windsor.
Frontenac, Leeds and Addington	do Frontenac, Leeds and Addington	do				
Grenville, Dundas and Stormont	do Grenville, Dundas and Stormont	do				
Glengarry and Prescott	do Glengarry and Prescott	do	Leather and raw hides			
Hamilton	All that territory lying south of the main line of the Grand Trunk Railway (not incorporated in the Division of Toronto) and east of the Port Dover and Lake Huron Railway	Nov. 10, 1885	Wheat and other grain	Edward Adamson	Inspector	Hamilton.
do	City of Hamilton	Aug. 29, 1873	Leather and raw hides	James Brown	do	do
Kingston	Comprising all that portion of Ontario lying west of Kingston and Pembroke Railway, and east of the eastern boundaries of the Counties of Ontario, Muskoka and Parry Sound	Nov. 10, 1885	Wheat and other grain	Wm. Bletcher	do	Port Hope.
do	City of Kingston	Aug. 29, 1873	Leather and raw hides	Peter McKim	do	Kingston.
Lanark and Renfrew	Counties of Lanark and Renfrew	Sept. 27, 1873	Beef and pork	Wm. Gardner	do	Dalhousie.
Lennox and Prince Edward	do Lennox and Prince Edward	do				
Lincoln and Welland	do Lincoln and Welland	do	Leather and raw hides	Michael Cairns	Inspector	St. Catharines.

List of Inspectors and Deputy Inspectors of Staple Articles of Canadian Commerce, &c.—*Continued.*

District.	Territory Comprising District.	Date of Order in Council.	Articles.	Name.	Office.	Residence.
Ontario—Continued.						
London	All that territory lying south of the line of the Grand Trunk Railway and west of the line of the Port Dover and Lake Huron Railway	Nov. 10, 1885	Wheat and other grain.			
do	City of London	Aug. 29, 1873	Leather and raw hides.	Simpson Thompson	Inspector	London.
Middlesex and Elgin	Counties of Middlesex and Elgin	Sept. 27, 1873				
Northumberland and Hastings	do Northumberland and Hastings	do	Leather and raw hides.	John Hodge	Inspector	Belleville.
Ontario and Durham	do Ontario and Durham	do	Flour and meal	Wm. Bletcher	do	Port Hope.
Oxford and Norfolk	do Oxford and Norfolk	do				
Ottawa	Comprising all that portion of Ontario lying east of the Kingston and Pembroke Railway	Nov. 10, 1885	Wheat and other grain.	W. J. McNeill	Inspector	Kingston.
do	City of Ottawa	Aug. 29, 1873	Leather and raw hides.	Francis McCullough.	do	Ottawa.
Perth and Huron	Counties of Perth and Huron	Sept. 27, 1873	do	John Meyers	do	Stratford.
Peterborough and Victoria	do Peterborough and Victoria	do				
Stratford	Comprising all that territory lying north of the Grand Trunk Railway between Guelph and Sarnia, and west of the western boundary of the Toronto Division, also all stations upon the line of the Grand Trunk and Georgian Bay Extension between Stratford and Wiarton	Nov. 10, 1885.	Wheat and other grain.			
Toronto	Beginning at the western boundary of the Kingston Division, thence westerly along the north shore of Lake Ontario to Burlington, thence northerly along the route of the Hamilton and North-Western Railway to Georgetown, thence westerly to					

	Guelph, along the line of the Grand Trunk Railway, and thence northwesterly by the westernmost route of the Wellington, Grey and Bruce Railway to Kincardine, excepting thereout all stations upon the line of the Grand Trunk and Georgian Bay Extension, which shall be deemed to be within the Inspection Division of Stratford	Nov. 10, 1885	Wheat and other grain.	Edward Adamson	Inspector	Toronto.
do	City of Toronto and Counties of York and Peel	April 26, 1875	Flour and meal	James Rough	do	do
do	do do	do	Leather and raw hides.	E. A. Thompson	do	do
do	do do	do	do		do	
Port Arthur	Town of Port Arthur and the territory adjacent thereto and comprised within a radius of 15 miles	Sept. 11, 1885	Wheat and other grain.	Frank E. Gibbs	do	Port Arthur.
Simcoe and Algoma	Counties of Simcoe and Algoma	Sept. 27, 1873	Fish and fish oils	Pat. Doherty	do	Collingwood.
Wellington and Waterloo	do Wellington and Waterloo	do				
Wentworth and Halton	do Wentworth and Halton	do				
Quebec.						
Drummond and Arthabaska	Counties of Drummond and Arthabaska	Sept. 13, 1877				
Gaspé and Bonaventure	do Gaspé, Bonaventure and the Magdalen Islands	Oct. 19, 1877				
Hochelaga	County of Hochelaga	April 12, 1886	Leather and raw hides.	J. H. Mooney	Inspector	Hochelaga.
Lévis	Counties of Lévis, Lotbinière, Bellechasse and Dorchester	March 15, 1886	do	E. Lemieux	do	Lévis.
Montreal	City of Montreal	Aug. 29, 1873	Flour and meal	Louis A. Boyer	do	Montreal.
do	do	do	Wheat and other grain.	Hospice Labelle	Inspector	do
do	do	do	do	W. E. Scott	Dep. Inspector	do
do	do	do	Beef and pork	James Doheney	Inspector	
do	do	do	Ashes	Edward J. Major	do	do
do	do	do	Fish and fish oils			
do	do	do	Leather and raw hides.	Antoine Masson	Inspector	do
do	do	do	do	D. Sykes	Dep. Inspector	do
Ottawa, County of	County of Ottawa, including City of Hull	Feb. 5, 1884	Leather and raw hides.	B. Simard	Inspector	Hull.
Quebec	City of Quebec	Aug. 29, 1873	Flour and meal	Benjamin Rousseau	do	Quebec.
do	do	do	do	Phileas Rousseau	Dep. Inspector	do
do	do	do	Beef and pork	David Nolan	Inspector	do
do	do Counties of Quebec, Montmorency, Charlevoix, Saguenay and Chicoutimi, for the purposes of inspection of fish and fish oils	April 29, 1878	Fish and fish oils	Hilaire Grenier	do	do
do	do do	do	do	Eutrope Grenier	do	do

LIST of Inspectors and Deputy Inspectors of Staple Articles of Canadian Commerce, &c.—*Continued.*

District.	Territory comprising District.	Date of Order in Council.	Articles.	Name.	Office.	Residence.
Quebec—Continued.						
Quebec	City of Quebec, Counties of Quebec, Montmorency, Charlevoix, Saguenay, and Chictoutimi, for the purposes of inspection of fish and fish oils	April 29, 1878	Fish and fish oils	Louis Côté	Dep. Inspector	Quebec.
do	do do	do	do	W. Sutherland	do	do
do	do do	do	do	J. Mathieu	do	do
do	do do	do	do	J. Roe	do	do
do	City of Quebec	do	Leather and raw hides.	Aldéric Fortin	Inspector	do
do	do	do	do do	Joseph Légaré	Dep. Inspector	do
do	do	do	Butter	Pierre Patoine	Inspector	do
Temiscouata and Kamouraska	Counties of Temiscouata and Kamouraska	April 1, 1875				
New Brunswick						
Carleton	That portion of the County of St. John, including Town of Carleton, lying to the west of the river	March 18, 1876	Fish and fish oils	S. L. Brittain	Inspector	Carleton.
Gloucester	County of Gloucester.	Oct. 12, 1875	do	Fred. Witzel	do	Gloucester.
do	do do	do	do	P. J. Commeau	Dep. Inspector	Petit Rocher.
Northumberland	do Northumberland	April 26, 1880				
Restigouche	do Restigouche	May 23, 1882	Fish and fish oils			
St. John	That portion of the City and County of St. John, lying to the east of the river.	March 18, 1876	do	F. W. Thomson.	Inspector.	St. John.
do	do do	do	Leather and raw hides.	Geo. Murdock	Dep. Inspector	do
do	do do	do	do do	Chas. Clarke	do	do
York	County of York	Dec. 27, 1883	do do	Israel Atherton	Inspector	Fredericton.
Nova Scotia.						
Annapolis	do Annapolis	June 25, 1877	Fish and fish oils	Israel Letteny	do	Granville.
Antigonish	do Antigonish	Oct. 16, 1873	do			
Argyle	Township of Argyle for fish and fish oils only	April 25, 1879	do			
Barrington	Township of Barrington	April 20, 1876				
Cape Breton	County of Cape Breton	July 8, 1874	Fish and fish oils	George Scott	Inspector	Main-à-Dieu.
do	do	do	do	Paul Buckley	Dep. Inspector	Scatarie Island.
do	do	do	do	Benjamin Boon	do	Mira Bay.
do	do	do	do	John Burke	do	Little Lorraine.
do	do	do	do	James Campbell	do	Main-à-Dieu.

do	do	do	do	Patrick Campbell	do	do
do	do	do	do	William Grant	do	Gaberouse.
do	do	do	do	Edward Jewell	do	Big Lorraine.
do	do	do	do	William Kelly	do	Louisburg.
do	do	do	do	William W. Peters	do	Cow Bay.
do	do	do	do	David Townsend	do	Louisburg.
do	do	do	do	John Townsend	do	do
do	do	do	do	John Varnen	do	Main-à-Dieu.
do	do	do	do	Thomas Wadden	do	Mira Bay.
do	do	do	do	James Young	do	North Sidney.
do	do	do	do	Charles Hardy	do	Gaberouse.
do	do	do	do	John Cryer	do	Louisburg.
do	do	do	do	John McLean	do	do
do	do	do	do	Alexander Rudolph	Inspector	Liscomb.
Guysborough, St. Mary's	Township of St. Mary's.	March 18, 1875.	do	James Pye	do	Marie Joseph.
Halifax	City and County of	Oct. 16, 1873.	do	E. Ryan	do	Halifax.
do	do	do	do	Abraham Bayers	Dep. Inspector	Jeddore.
do	do	do	do	Frederick Bouteillier	do	Indian Harbour.
do	do	do	do	G. P. Boutillier	do	Shad Village.
do	do	do	do	John Brooks	do	Ferguson's Cove.
do	do	do	do	Jason Chapman	do	Ship Harbour.
do	do	do	do	Jas. W. Christian	do	Upper Prospect.
do	do	do	do	Patrick Christian	do	do
do	do	do	do	Simon Cleveland	do	West Dover.
do	do	do	do	James A. Coolen	do	Upper Prospect.
do	do	do	do	William Coolen.	do	Blind Bay.
do	do	do	do	William E. Coolen	do	Shad Bay.
do	do	do	do	William Condon	do	Egg Island.
do	do	do	do	Robert Connors	do	Dover.
do	do	do	do	Anthony Cooper	do	Tangier.
do	do	do	do	Isaac Croucher	do	French Village.
do	do	do	do	Archibald Darrah	do	Herring Cove.
do	do	do	do	Peter Dauphiné	do	Hubbard's Cove.
do	do	do	do	Thomas Doyle	do	Halifax.
do	do	do	do	James Fader	do	West Dover.
do	do	do	do	Jeremiah Fillis	do	Chezzetcook.
do	do	do	do	Peter Fleming	do	Ketch Harbour.
do	do	do	do	Richard J. Fleming	do	do
do	do	do	do	Wm. Fraser	do	Seaforth L. Ward
do	do	do	do	James Fraser.	do	Dover.
do	do	do	do	Thomas Lynch.	do	do
do	do	do	do	Samuel Hardman.	do	Upper Prospect.
do	do	do	do	James E. Conrad	do	Hubbard's Cove.
do	do	do	do	John Richardson.	do	Indian Harbour.
do	do	do	do	Simon Colp	do	Margaret's Bay.
do	do	do	do	Judson T. Hubley	do	Indian Harbour.
do	do	do	do	Wm. McCarthy	do	Taylor's Head.
do	do	do	do	Daniel Casey	do	Petpeswick.
do	do	do	do	Charles Fulker	do	S. E. Passage.
do	do	do	do	Sydney Garrison	do	Peggy's Cove.

List of Inspectors and Deputy Inspectors of Staple Articles of Canadian Commerce, &c.—*Continued.*

District.	Territory comprising District.	Date of Order in Council.	Articles.	Name.	Office.	Residence.
Quebec—Continued.						
Quebec	City of Quebec, Counties of Quebec, Montmorency, Charlevoix, Saguenay, and Chicoutimi, for the purposes of inspection of fish and fish oils	April 29, 1878	Fish and fish oils	Louis Côté	Dep. Inspector	Quebec.
do	do do	do	do	W. Sutherland	do	do
do	do do	do	do	J. Mathieu	do	do
do	do do	do	do	J. Roe	do	do
do	City of Quebec	do	Leather and raw hides.	Aldéric Fortin	Inspector	do
do	do	do	do do	Joseph Légaré	Dep. Inspector	do
do	do	do	Butter	Pierre Patoine	Inspector	do
Temiscouata and Kamouraska	Counties of Temiscouata and Kamouraska	April 1, 1875				
New Brunswick						
Carleton	That portion of the County of St. John, including Town of Carleton, lying to the west of the river	March 18, 1876	Fish and fish oils	S. L. Brittain	Inspector	Carleton.
Gloucester	County of Gloucester	Oct. 12, 1875	do	Fred. Witzel	do	Gloucester.
do	do do	do	do	P. J. Commeau	Dep. Inspector	Petit Rocher.
Northumberland	do Northumberland	April 26, 1880				
Restigouche	do Restigouche	May 23, 1882	Fish and fish oils			
St. John	That portion of the City and County of St. John, lying to the east of the river.	March 18, 1876	do	F. W. Thomson.	Inspector.	St. John.
do	do do	do	Leather and raw hides.	Geo. Murdock	Dep. Inspector	do
do	do do	do	do do	Chas. Clarke	do	do
York	County of York	Dec. 27, 1883	do do	Israel Atherton	Inspector.	Fredericton.
Nova Scotia.						
Annapolis	do Annapolis	June 25, 1877	Fish and fish oils	Israel Letteny	do	Granville.
Antigonish	do Antigonish	Oct. 16, 1873	do			
Argyle	Township of Argyle for fish and fish oils only	April 25, 1879	do			
Barrington	Township of Barrington	April 20, 1876				
Cape Breton	County of Cape Breton	July 8, 1874	Fish and fish oils	George Scott	Inspector	Main-à-Dieu.
do	do	do	do	Paul Buckley	Dep. Inspector	Scatarie Island.
do	do	do	do	Benjamin Boon	do	Mira Bay.
do	do	do	do	John Burke	do	Little Lorraine.
do	do	do	do	James Campbell	do	Main-à-Dieu.

do	do	do	do	Patrick Campbell	do	do
do	do	do	do	William Grant	do	Gaberouse.
do	do	do	do	Edward Jewell	do	Big Lorraine.
do	do	do	do	William Kelly	do	Louisburg.
do	do	do	do	William W. Peters	do	Cow Bay.
do	do	do	do	David Townsend	do	Louisburg.
do	do	do	do	John Townsend	do	do
do	do	do	do	John Varnen	do	Main-à-Dieu.
do	do	do	do	Thomas Wadden	do	Mira Bay.
do	do	do	do	James Young	do	North Sidney.
do	do	do	do	Charles Hardy	do	Gaberouse.
do	do	do	do	John Cryer	do	Louisburg.
do	do	do	do	John McLean	do	do
do	do	do	do	Alexander Rudolph	Inspector	Liscomb.
Guysborough, St. Mary's	Township of St. Mary's.	March 18, 1875.	do	James Pye	do	Marie Joseph.
Halifax	City and County of	Oct. 16, 1873	do	E. Ryan	do	Halifax.
do	do	do	do	Abraham Bayers	Dep. Inspector	Jeddore.
do	do	do	do	Frederick Bouteillier	do	Indian Harbour.
do	do	do	do	G. P. Boutillier	do	Shad Village.
do	do	do	do	John Brooks	do	Ferguson's Cove.
do	do	do	do	Jason Chapman	do	Ship Harbour.
do	do	do	do	Jas. W. Christian	do	Upper Prospect.
do	do	do	do	Patrick Christian	do	do
do	do	do	do	Simon Cleveland	do	West Dover.
do	do	do	do	James A. Coolen	do	Upper Prospect.
do	do	do	do	William Coolen	do	Blind Bay.
do	do	do	do	William E. Coolen	do	Shad Bay.
do	do	do	do	William Condon	do	Egg Island.
do	do	do	do	Robert Connors	do	Dover.
do	do	do	do	Anthony Cooper	do	Tangier.
do	do	do	do	Isaac Croucher	do	French Village.
do	do	do	do	Archibald Darrah	do	Herring Cove.
do	do	do	do	Peter Dauphiné	do	Hubbard's Cove.
do	do	do	do	Thomas Doyle	do	Halifax.
do	do	do	do	James Fader	do	West Dover.
do	do	do	do	Jeremiah Fillis	do	Chezzetcook.
do	do	do	do	Peter Fleming	do	Ketch Harbour.
do	do	do	do	Richard J. Fleming	do	do
do	do	do	do	Wm. Fraser	do	Seaforth L. Ward
do	do	do	do	James Fraser	do	Dover.
do	do	do	do	Thomas Lynch	do	do
do	do	do	do	Samuel Hardman	do	Upper Prospect.
do	do	do	do	James E. Conrad	do	Hubbard's Cove.
do	do	do	do	John Richardson	do	Indian Harbour.
do	do	do	do	Simon Colp	do	Margaret's Bay.
do	do	do	do	Judson T. Hubley	do	Indian Harbour.
do	do	do	do	Wm. McCarthy	do	Taylor's Head.
do	do	do	do	Daniel Casey	do	Petpeswick.
do	do	do	do	Charles Fulker	do	S. E. Passage.
do	do	do	do	Sydney Garrison	do	Peggy's Cove.

List of Inspectors and Deputy Inspectors of Staple Articles of Canadian Commerce, &c—*Concluded.*

District.	Territory comprising District.	Date of Order in Council.	Articles.	Name.	Office.	Residence.
Nova Scotia—Continued.						
Halifax	City and County of	Oct. 16, 1873	Fish and fish oils	James M. Gates	Dep. Inspector	Seaforth.
do	do	do	do	Ed. Hayes	do	Herring's Cove.
do	do	do	do	John Hayes	do	do
do	do	do	do	James Hearn	do	Upper Prospect.
do	do	do	do	John A. Hearn	do	do
do	do	do	do	James Henley	do	Spry Bay.
do	do	do	do	George Hertling	do	Bay of Islands.
do	do	do	do	Charles Holland	do	Duncan's Cove.
do	do	do	do	Ephraim Hubley	do	St. Mary's Bay, Black Pt.
do	do	do	do	James Hubley	do	do
do	do	do	do	Peter Jollimore	do	Turn's Bay
do	do	do	do	Wm. B. Johnston	do	Bear Cove.
do	do	do	do	John Julian	do	Chezzetcook.
do	do	do	do	Maurice Kavanagh	do	Halifax.
do	do	do	do	George Lapierre	do	Chezzetcook.
do	do	do	do	Geo. Leslie	do	Spry Bay.
do	do	do	do	Simon MacKay	do	Ketch Harbour.
do	do	do	do	George Marryatt	do	Pennant.
do	do	do	do	Francis Mason	do	St. Mary's Bay, Inkerman Har.
do	do	do	do	Isaac Melvin	do	Halifax.
do	do	do	do	Peter Mitchell	do	Ship Harbour.
do	do	do	do	John Mongovan	do	Laurence Town.
do	do	do	do	William Monck	do	Ship Harbour.
do	do	do	do	Jas. Morash	do	Dover West.
do	do	do	do	Joseph Mulcahey	do	Halifax.
do	do	do	do	Thomas Mulcahey	do	do
do	do	do	do	Charles McLean	do	Hubbard's Cove.
do	do	do	do	Wm. McLean	do	Ferguson's Cove.
do	do	do	do	Richard G. Martin	do	Ketch Harbour.
do	do	do	do	Thomas Noonan	do	Upper Prospect.
do	do	do	do	Martin O'Neil	do	Portuguese Cove
do	do	do	do	James Power	do	do
do	do	do	do	James Publicover	do	Ecum Secum.
do	do	do	do	David Redmond	do	Shad Bay.
do	do	do	do	Michael Rice	do	Lower Prospect.
do	do	do	do	Denis Ryan	do	do
do	do	do	do	Henry A. Shalford	do	Hubbard's Cove.

do	do	do	do	John E. Shalford	do	do
do	do	do	do	Nath. Smith	do	Halifax.
do	do	do	do	Amos Slauenwhite	do	Musquodoboit.
do	do	do	do	Jas. F. Slauenwhite	do	Turn's Bay.
do	do	do	do	Jas. W. Slauenwhite	do	do
do	do	do	do	John P. Slauenwhite	do	do
do	do	do	do	J. W. Smeltzer	do	French Village.
do	do	do	do	James Troop	do	Dover.
do	do	do	do	Alex. Turple	do	Clam Bay.
do	do	do	do	Jeremiah Twohig	do	Pennant.
Pictou	County of Pictou	do	Leather	John Sutherland	Inspector	Pictou
do	do	do	Hides	Charles Wilson	do	do
Queen's	County of Queen's	Feb. 28, 1881	Fish and fish oils			
Richmond	County of Richmond, exclusive of Territory set apart at the District of Isle Madame	Oct. 16, 1873	do	M. J. Kavanagh	Inspector	St. Peter's, C.B.
do	do do	do	do	E. Malcolm	Dep. Inspector	Cariboo Cove.
do	do do	do	do	Fred. Mauborquet	do	Upper L'Ardoise
do	do do	do	do	Colin McDonald	do	Fourchu.
do	do do	do	do	John McDonald	do	St. Peter's.
do	do do	do	do	Alex. McKay	do	Grand River.
do	do do	do	do	John Walker	do	River Inhabit'ts.
do	do do	do	do	Charles Samson	do	Lower L'Ardoise
do	do do	do	do	Sam. Clannan	do	Point Michaud.
Shelburne	Township of Shelburne	April 20, 1876	do			
Victoria	County of Victoria	Oct. 16, 1873	do	J. A. Matheson	Inspector	S. Bay, Ingonish
do	do	do	do	Geo. Fader	Dep. Inspector	Englishtown.
do	do	do	do	John McNeil	do	Ingonish.
do	do	do	do	Hugh McQueen	do	North Shore.
do	do	do	do	Isaac Roper	do	Ingonish.
do	do	do	do	Murdoch McDonald	do	Neil's Harbour.
Prince Edward Island.						
Charlottetown	Province of Prince Edward Island	June 22, 1886	Leather and raw hides			
Prince	County of Prince	do 19, 1886	Fish and fish oils			
Manitoba.						
Winnipeg	City of Winnipeg	Aug. 20 1884	Wheat and other grain	David Horn	Inspector	Winnipeg.
do	do	do	do	James Massie	Dep. Inspector	do
do	do	do	Leather and raw hides.	W. J. Bird	Inspector	do

DEPARTMENT OF INLAND REVENUE,
OTTAWA, 17th August, 1891.

E. MIALL,
Commissioner.

List of Inspectors and Deputy Inspectors of Staple Articles of Canadian Commerce, &c—*Concluded.*

District.	Territory comprising District.	Date of Order in Council.	Articles.	Name.	Office.	Residence.
Nova Scotia—Continued.						
Halifax	City and County of	Oct. 16, 1873	Fish and fish oils	James M. Gates	Dep. Inspector	Seaforth.
do	do	do	do	Ed. Hayes	do	Herring's Cove.
do	do	do	do	John Hayes	do	do
do	do	do	do	James Hearn	do	Upper Prospect.
do	do	do	do	John A. Hearn	do	do
do	do	do	do	James Henley	do	Spry Bay.
do	do	do	do	George Hertling	do	Bay of Islands.
do	do	do	do	Charles Holland	do	Duncan's Cove.
do	do	do	do	Ephraim Hubley	do	St. Mary's Bay, Black Pt.
do	do	do	do	James Hubley	do	do
do	do	do	do	Peter Jollimore	do	Turn's Bay
do	do	do	do	Wm. B. Johnston	do	Bear Cove.
do	do	do	do	John Julian	do	Chezzetcook.
do	do	do	do	Maurice Kavanagh	do	Halifax.
do	do	do	do	George Lapierre	do	Chezzetcook.
do	do	do	do	Geo. Leslie	do	Spry Bay.
do	do	do	do	Simon MacKay	do	Ketch Harbour.
do	do	do	do	George Marryatt	do	Pennant.
do	do	do	do	Francis Mason	do	St. Mary's Bay, Inkerman Har.
do	do	do	do	Isaac Melvin	do	Halifax.
do	do	do	do	Peter Mitchell	do	Ship Harbour.
do	do	do	do	John Mongovan	do	Laurence Town.
do	do	do	do	William Monck	do	Ship Harbour.
do	do	do	do	Jas. Morash	do	Dover West.
do	do	do	do	Joseph Mulcahey	do	Halifax.
do	do	do	do	Thomas Mulcahey	do	do
do	do	do	do	Charles McLean	do	Hubbard's Cove.
do	do	do	do	Wm. McLean	do	Ferguson's Cove.
do	do	do	do	Richard G. Martin	do	Ketch Harbour.
do	do	do	do	Thomas Noonan	do	Upper Prospect.
do	do	do	do	Martin O'Neil	do	Portuguese Cove
do	do	do	do	James Power	do	do
do	do	do	do	James Publicover	do	Ecum Secum.
do	do	do	do	David Redmond	do	Shad Bay.
do	do	do	do	Michael Rice	do	Lower Prospect.
do	do	do	do	Denis Ryan	do	do
do	do	do	do	Henry A. Shalford	do	Hubbard's Cove.

do	do	do		do	John E. Shalford	do	do
do	do	do		do	Nath. Smith	do	Halifax.
do	do	do		do	Amos Slauenwhite	do	Musquodoboit.
do	do	do		do	Jas. F. Slauenwhite	do	Turn's Bay.
do	do	do		do	Jas. W. Slauenwhite	do	do
do	do	do		do	John P. Slauenwhite	do	do
do	do	do		do	J. W. Smeltzer	do	French Village.
do	do	do		do	James Troop	do	Dover.
do	do	do		do	Alex. Turple	do	Clam Bay.
do	do	do		do	Jeremiah Twohig	do	Pennant.
Picton	County of Pictou.	do		Leather	John Sutherland	Inspector	Pictou
do	do	do		Hides	Charles Wilson	do	do
Queen's	County of Queen's	Feb. 28,	1881	Fish and fish oils			
Richmond	County of Richmond, exclusive of Territory set apart at the District of Isle Madame	Oct. 16,	1873	do	M. J. Kavanagh	Inspector	St. Peter's, C.B.
do	do do	do		do	E. Malcolm	Dep. Inspector	Cariboo Cove.
do	do do	do		do	Fred. Mauborquet	do	Upper L'Ardoise
do	do do	do		do	Colin McDonald	do	Fourchu.
do	do do	do		do	John McDonald	do	St. Peter's.
do	do do	do		do	Alex. McKay	do	Grand River.
do	do do	do		do	John Walker	do	River Inhabit'ts.
do	do do	do		do	Charles Samson	do	Lower L'Ardoise
do	do do	do		do	Sam. Clannan.	do	Point Michaud.
Shelburne	Township of Shelburne	April 20,	1876	do			
Victoria	County of Victoria	Oct. 16,	1873	do	J. A. Matheson	Inspector	S. Bay, Ingonish
do	do	do		do	Geo. Fader	Dep. Inspector	Englishtown.
do	do	do		do	John McNeil	do	Ingonish.
do	do	do		do	Hugh McQueen	do	North Shore.
do	do	do		do	Isaac Roper	do	Ingonish.
do	do	do		do	Murdoch McDonald.	do	Neil's Harbour.
Prince Edward Island.							
Charlottetown	Province of Prince Edward Island	June 22,	1886	Leather and raw hides			
Prince	County of Prince	do 19,	1886	Fish and fish oils			
Manitoba.							
Winnipeg	City of Winnipeg	Aug. 20	1884	Wheat and other grain	David Horn	Inspector	Winnipeg.
do	do	do		do	James Massie	Dep. Inspector	do
do	do	do		Leather and raw hides.	W. J. Bird	Inspector	do

Department of Inland Revenue,
Ottawa, 17th August, 1891.

E. MIALL,
Commissioner.

APPENDIX

Statement showing Quantity of certain Staple Articles of Canadian Commerce, June, 1891, and Fees accrued thereon as returned to the

WHEAT AND

Districts.	Wheat.												
	Manitoba Hard.			Northern.			Spring.				White Fyfe.		Goose
	1.	2.	3.	1.	2.	3.	1.	2.	3.	Rejected.	1.	2.	1.
	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.
Montreal....	3,600	220,320	252,600	....	64,980	12,120	83,640	20,100	13,200	5,700	....	....	....
Kingston....	....	....	....	....	....	....	....	6,420	....	....	....	....	....
Toronto. ...	800	24,800	30,400	....	....	....	....	35,600	17,800	6,600	....	....	1,500
Port Arthur.	9,500	677,160	594,700	....	644,860	27,360	....	....	....	97,660	3,420	2,660	....
Winnipeg....	4,940	566,200	952,920	1,900	496,660	114,280	....	....	....	213,940	....	....	....
Total ...	18,840	1,488,480	1,830,620	1,900	1,206,500	153,760	83,640	62,120	31,000	323,900	3,420	2,660	1,500

WHEAT AND OTHER

Districts.	Other Grain.											
	Indian Corn.						Oats.				Rye.	
	2 White.	1 Yellow.	2 Yellow.	2.	No. of Grade	Rejected	1.	2.	3.	Rejected	2.	Rejected
	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.
Montreal	115,416	280	280	985,120	6,720	280	....	301,048	62,792	42,808	146,776	560
Kingston.	....	....	....	....	....	....	....	....	....	....	....	....
Toronto.......	....	....	....	....	....	....	4,500	37,580	300	5,000	....	....
Port Arthur...	....	....	....	....	....	....	....	....	....	....	....	....
Winnipeg.....	....	....	....	....	....	....	....	....	....	....	....	....
Total. ...	115,416	280	280	985,120	6,720	280	4,500	338,628	63,092	47,808	146,776	560

FLOUR AND

Districts.	Patent Winter.	Patent Spring.	Straight Roller.		Extra.		Superfine.	
	Brls.	Bags.	Brls.	Bags.	Brls.	Bags.	Brls.	Bags.
Quebec..	....	....	2,508	250	2,987	200	1,482	....
Montreal....	74	132	26,402	....	7,593	....	5,171	291
Total..	74	132	28,910	250	10,580	200	6,653	291

Cr.-

inspected under provisions of Revised St., cap. 99, during the Year ended 30th Department of Inland Revenue by the respective Inspectors.

OTHER GRAIN.

WHEAT.

Buckwheat.			Frosted.				White Winter.		Mixed Winter.				Red Winter	No. of Grade.	Con-demned.
2.	3.	Re-jectd	1.	2.	3.	Feed.	1.	2.	2.	3.	Feed.	Re-jected	2.		
Ctls.	Ctls	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls	Ctls.	Ctls	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls
61,601	588	864	262,200	85,380	5,100	31,020	300	20,400	900	300	......	......	40,380	....	280
....	....	....	......	......	.....	.....	....	6,900	....	......	......	......	......	......	....
.....	.....	..	16,800	7,600	.....	......	600	40,200	....	25,900	......	3,300	9,300	......	....
...	....	....	360,620	262,960	45,980	20,140	..	.....	....	.....	......	.....	......	87,780	...
.....	....	.....	571,520	389,500	......	.....	....	.....	...	......	258,020	.....	....	237,500	...
61,601	588	864	1,211,140	745,440	51,080	51,160	900	67,500	900	26,200	258,020	3,300	49,680	325,280	280

GRAIN—*Concluded.*

OTHER GRAIN.

Barley.						Peas.				Fees.
1.	2.	3 Extra.	3.	Feed.	Re-jected.	1.	2.	3.	Re-jected.	
Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	$ cts.
3,456	8,352	8,640	40,992	20,160	6,336	1,800	958,740	42,900	2,400	3,823 60
2,880	4,320	13,080	10,120	....	....	....	....	....	....	60 40
3,300	42,000	350,863	9,100	....	900	....	....	....	....	1,132 44
....	....	....	....	....	....	....	....	....	....	4,926 00
....	....	....	....	....	....	....	....	....	....	6,029 40
9,636	54,672	372,583	60,212	20,160	7,236	1,800	958,740	42,900	2,400	15,971 84

MEAL.

Strong Bakers.		On Sample.		Sour.		Fine.	Rejected.		Fees.
Brls.	Bags.	Brls.	Bags.	Brls.	Bags.	Brls.	Brls.	Bags.	
									$ cts.
250	....	....	12,518	....	833	....	300	810	407 90
......	1,900	501	9,581	940	4,116	1,662	92	195	1,033 68
250	1,900	501	22,099	940	4,949	1,662	392	1,005	1,441 58

STATEMENT showing Quantity of certain Staple

BEEF AND

Districts.	Beef.		
	Mess.	Prime Mess.	Rejected.
	Brls.	Brls.	Brls.
Quebec	211	52	20

PICKLED

Districts.	Salmon.		Sea Trout.		Mackerel.		Herring.	
	Brls.	½ brls.	Brls.	½ brls.	Brls.	½ brls.	Brls.	½ brls.
Quebec	347	7	126	9			1,946	94
Carleton, N.B.							48	684
St. John							1,215	3,675
Halifax	1,568	18	89		12,525	270	3,434	60
Victoria	27	3			341	1	109	
Simcoe and Algoma								
Isle Madame					365	7	548	151
	1,942	28	215	9	13,231	278	7,300	4,664

FISH

Districts.	Whale Oil.		Seal Oil.						
	No. 1 Pale.	No. 2 Straw.	No. 2 Pale.	No. 3 Straw.		No. 4 Brown.		No. 5 Dark Brown.	
	Tierces.	Tierces.	Tierces.	Tierces.	Brls.	Tierces.	Brls.	Tierces.	Brls.
Quebec			30	612	33	60	5	38	1
St. John									
Halifax	9	3	222	22		9		6	2
	9	3	252	634	33	69	5	44	3

Articles of Canadian Commerce Inspected, &c.—*Continued.*

PORK.

Pork.					Fees.
Mess.	Prime Mess.	Thin Mess.	Extra Prime.	Rejected.	
Brls.	Brls.	Brls.	Brls.	Brls.	$ cts.
909	7	29	36	63	331 75

FISH.

Gaspereaux and Alewives.		Halibut	Codfish.		White-fish.	Eels.		Other fish.		Fees.
Brls.	½ brls.	Brls.	Brls.	½ brls.	Brls.	Brls.	½ brls.	Brls.	½ brls.	$ cts.
....	....	8	6,600	5	11	778	1	49	......	544 23
4,456	....	....	....	....	....	....	....	....	....	250 82
4,194	....	....	....	....	....	....	....	....	....	380 44
748	1	....	279	....	....	....	....	5	1	1,799 53
4	1	....	29	....	....	....	....	....	....	46 28
....	....	....	....	....	....	....	....	....	....	
194	....	....	....	....	....	....	....	....	....	99 36
9,596	2	8	6,908	5	11	778	1	54	1	3,120 66

OIL.

Porpoise Oil.				Cod Oil.				Herring Oil.	Hake Oil.		Other Fish Oil.		Fees.
No. 1 Pale.	No. 2 Straw.		No. 3 Brown.	A.		B.		A.	A.		A.		
Tierces.	Tierces.	Brls.	Tierces.	Tierces.	Brls.	Tierces.	Brls.	Brls.	Tierces.	Brls.	Tierces.	Brls.	$ cts.
149	99	6	28	2,370	137	15	2	1	......	......	25	1	711 15
....	......	8	....	......	385	......	13	2	....	227	....	.....	95 25
......	......	....	....	1,541	29	7	.....	....	18	.....	......	.....	372 05
149	99	14	28	3,911	551	22	15	3	18	227	25	1	1,178 45

Statement showing Quantity of certain Staple Articles of Canadian Commerce Inspected, &c.—*Concluded.*

LEATHER AND HIDES.

District.	Hides.				Calf Skins.			Fees.	
	1.	2.	3.	Sq. Ft.	1.	2.	3.		
								$	cts.
Montreal	46,030	9,724	6,372	....	....	....	....	3,037	47
Quebec	15,946	9,305	875	123,570	....	....	....	2,701	50
Belleville	4,812	715	54	....	....	....	....	278	05
Hamilton	18,097	3,701	683	....	3,119	616	....	1,310	80
Kingston	6,117	445	702	....	....	....	....	373	70
St. Catharines	3,400	170	72	....	868	175	....	200	14
Ottawa	4,042	1,043	230	....	....	....	....	263	25
Toronto	48,097	27,604	3,058	....	5,238	1,898	....	4,289	75
Fredericton	2,358	118	1	....	....	....	....	124	73
St. John	9,895	945	....	....	....	....	....	545	35
Winnipeg	7,991	4,950	494	....	582	623	49	733	05
Paris	1,897	546	34	....	....	....	....	148	85
	168,682	59,266	12,575	123,570	9,807	3,312	49	14,006	64

E. MIALL,
Commissioner.

Department of Inland Revenue,
Ottawa, 17th August, 1891.

APPENDIX B.

STATEMENT of Seizures on Account of Illicit Manufactures for Fiscal Year ended the 30th June, 1891.

Date.	Names.	No.	Schedule Value.		Division.	Remarks.
			$	cts.		
Oct. 2, 1890.	Chas. Garrette	29	3	00	Cape Breton	
Nov. 21, 1890.	Fred. Bevan	12	5	00	Charlottetown	Gaoled for six months.
do 10, 1890.	C. McQueen	103	30	00	Halifax	
Oct. 27, 1890.	Shatford Bros	104	65	00	do	Fined $10.
do 27, 1890.	Xavier Lamarche	98	1	20	Joliette	
do 27, 1890.	do	99	26	00	do	
do 27, 1890.	Ernest Piquette	100	8	75	do	
do 27, 1890.	Wilfred Lafranchise	101	2	00	do	
Nov. 7, 1890	Elie Forest	102	3	10	do	Fined $10.
do 28, 1890	Placide Mireault	103	332	47	do	do $150.
Jan. 5, 1891.	Ulric Gervais	104	13	00	do	Confiscation sufficient.
do 23, 1891.	Thos. E. Kelly	105	41	50	do	
do 29, 1891.	Anatole Archambault	106	4	50	do	Fined $10.
do 31, 1891.	Edmond Morin	107	36	00	do	do $10.
do 31, 1891.	Magloire Barrette	108	9	40	do	do $10.
Feb. 28, 1891.	Jos. Simard	109	0	50	do	
Nov. 22, 1890.	Neil Cooper	50	4	00	London	
July 20, 1890.	Telesphore Poupart	633	289	50	Montreal	$120 penalty.
Aug. 13, 1890.	E. Blanchard	634	0	52	do	Confiscation sufficient. Goods destroyed.
do 18, 1890.	Dr. A. B. Champagne	635	30	00	do	Confiscation sufficient.
Sept. 9, 1890.	Telesphore Poupart	636	1,234	65	do	
do 30, 1890.	Elie Forest	637	7	30	do	Fined $10.
Oct. 25, 1890.	Flavien Rochette & Co.	638	9	00	do	
do 25, 1890.	Jas. Dalrymple	639	15	45	do	Confiscation sufficient.
do 25, 1890.	J. LeMoine	640	17	70	do	
do 25, 1890.	P. Vanier	641	0	82	do	
Nov. 15, 1890	D. Brulé	642	4	00	do	Confiscation sufficient.
do 24, 1890.	A. Jetté	643	11	50	do	
do 25, 1890.	D. C. Brousseau	644	0	50	do	
Jan. 8, 1891.	S. Hyman	645	6	00	do	Fined $10.
do 8, 1891.	J. B. Cazelais	646	14	00	do	do $20.
do 8, 1891.	A. J. Charlebois	647	50	20	do	do $16.50
do 12, 1891.	Mongenais, Boivin & Co	648	16	60	do	do $10.
do 27, 1891.	Fred. Corriveau	649	0	90	do	
do 27, 1891.	G. W. Pringle	650	0	96	do	
do 24, 1891.	Isaïe Riopelle	651	3	45	do	
do 24, 1891.	Rudolph Riopelle	652	3	15	do	
do 29, 1891.	M. R. Fournier	653	0	15	do	
do 29, 1891.	Madame Gagnon	654	1	00	do	
do 29, 1891.	Nap. Tremblay	655	10	00	do	
do 27, 1891.	J. B. W. Bédard	656	10	00	do	
do 30, 1891.	V. Potvin. Pelletier. Bédard	657	447	31	do	Potvin & Bédard fined each $100. Pelletier evaded arrest.
Mar. 6, 1891.	Wm. Walker	659	1	90	do	
May —, 1891.	L. E. Morin & Co				do	Fined $10.
April 1, 1891.	J. M. Lavoie	100	120	00	Ottawa	do $10.
do 27, 1891.	F. Barrette	101	1	40	do	do $10.
May 1, 1891.	S. & B. Kennedy	102	35	49	do	
do 6. 1891.	P. Desrosiers	103	2	40	do	Fined $10.
do 6, 1891	A. Labelle	104	0	20	do	do $10.
do 6, 1891.	P. Daoust	105	0	20	do	do $10.
Nov. 7, 1890.	Wm. McDonald.	54	30	00	Pictou	
April 22, 1891.	Albert Beckwith	55	33	00	do	$100 fine imposed & nine months' gaol; in default of payment four months further gaol.
June 22, 1891	Albert Ryan	25	10	00	Prescott	$100 penalty.
Aug. 18, 1890.	Joseph Poitras	262			Quebec	
Sep. 3, 1890.	Joseph Boucher	263	0	80	do	
do 26, 1890.	Unknown	264	126	59	do	

Statement of Seizures on account of Illicit Manufactures for Fiscal Year ended the 30th June, 1891—*Concluded.*

Date.	Name.	No.	Schedule Value.		Division.	Remarks.
			$	cts.		
Oct. 10, 1890.	Beaupré & Frère	265	72	00	Quebec	
do 16, 1890.	D. Falardeau	266	0	80	do	Fined $10.
do 30, 1890.	N. McNeill	267	74	15	do	
Nov. 3, 1890.	Wharf, G.T. Railway	268	23	10	do	
do 3, 1890.	Louis D'Anjou	269	15	68	do	
do 7, 1890.	X. Lavallée	270	50	33	do	
do 7, 1890.	Jno. Morin	271	38	83	do	
do 11, 1890.	A. Drolet	272	269	90	do	
do 13, 1890.	Wilbrod Rousseau	273	50	51	do	
do 14, 1890.	Alexis Caron	274	51	14	do	
Dec. 12, 1890.	J. B. V. Chamberland.	275	62	63	do	
do 23, 1890.	C. Cordollez	276	10	00	do	
Jan. 5, 1891.	François Drolette	277	19	80	do	
Feb. 3, 1891.	Polycarpe Nadeau	278	11	50	do	Fined $25.
do 25, 1891.	J. B. Morin	279	23	54	do	
Mar. 25, 1891.	Joseph Thivierge	280	6	00	do	
April 4, 1891.	N. Dussault	281	33	80	do	
May 20, 1891.	Jos. Connolly	282	80	00	do	$100 penalty.
do 4, 1891.	W. W. Page	36	55	00	Sherbrooke	
July 14, 1890.	E. C. Wurtele	49	2	65	Sorel	
Nov. 3, 1890.	Alexis Plante	50	21	48	do	
do 4, 1890.	J. B. Guerramont	51	24	70	do	
do 4, 1890.	S. Langlade	52	14	60	do	
July 24, 1890.	Leonard Cooke	35	15	00	St. Hyacinthe.	
Oct. 2, 1890.	Romuald Bergeron	36	166	95	do	
do 6, 1890.	André Dumaine	37	25	00	do	Fined $100 and one month gaol.
do 6, 1890.	do	37	25	00	do	
Aug. 8, 1890.	George P. Hogan	40	14	00	St. John	do $10.
do 20, 1890.	J. B. Robinson	41	5	00	do	do $50.
July 22, 1890.	J. C. Harris	296	94	08	Toronto	Distributed.
Oct. 17, 1890.	J. J. Jackson	297	15	00	do	$100 and costs and one month gaol.
Mar. 16, 1891.	Arthur Greenwood	298	3	20	do	Fined $25.
April 9, 1891.	Robert Cooper	299	10	00	do	
June 6, 1891.	Leroy Hill	300	11	25	do	do $70.
do 26, 1891.	Jno. M. Ross	301	26	00	do	do $50.
July 22, 1890.	J. H. Dobbie & Foster	27	22	40	Winnipeg	do $150.
Aug. 6, 1890.	D. Roy Logan	28	2	50	do	do $10.
Dec. 5, 1890.	Wm. Roberts & Co.	29	5	90	do	Confiscation sufficient.
Feb. 4, 1891.	A. J. Prongua	30	5	00	do	Convicted and fined $700.
April 15, 1891.	M. McKenzie	31	231	00	do	Fined $50.
do 15, 1891.	Jos. Noël	32	77	80	do	do $50.
May 1, 1891.	Jno. Wilson	33	200	00	do	

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

APPENDIX E.

Statement showing the amount of Excise Revenue collected at each of the undermentioned Out-Offices, during the Year ended 30th June, 1891.

Divisions.	Out-Offices.	Spirits.	Malt Liquor.	Malt.	Tobacco.	Cigars.	Petroleum	Manufactures in Bond.	Seizures.	Other Receipts.	Total.
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Belleville	Deseronto				2,878 60						2,878 60
	Trenton	3,249 16		235 82	3,016 60	81 00					6,582 58
Brantford	Ingersoll					2,002 95					2,002 95
	Paris					1,755 00					1,755 00
	Tilsonburg			1,692 76							1,692 76
	Woodstock	11,737 38		871 92	773 00	1,087 95					14,470 25
Guelph	Baden			50 00							50 00
	Bamburg			50 00							50 00
	Berlin	28,472 59			7,497 20	7,214 15					43,183 94
	Bridgeport			50 00							50 00
	Galt			7,681 88		833 70					8,515 58
	New Hamburg			1,555 00							1,555 00
	Preston			2,011 71		2,794 80					4,806 51
	Salem			100 00							100 00
	Waterloo	160,565 96		7,788 12		1,794 30				710 00	170,858 38
Hamilton	Dundas			16,531 89							16,531 89
	Greensville			7,700 66							7,700 66
Kingston	Napanee	6,724 38			4,589 00					50 00	11,363 38
London	Petrolea	4,139 59				422 40	12,540 95			20 00	17,122 94
	Sarnia	7,542 52	212 00	1,750 00	12,320 40	1,042 50	90 00			30 00	22,988 22
	Strathroy	3,822 38		3,927 34	97 40					120 00	7,967 12
	St. Thomas	12,257 67		3,463 08	3,841 90	5,319 00	280 00			17 50	24,179 15
Owen Sound	Meaford	2,985 94									2,985 94
	Newstadt			773 35							773 35
Perth	Arnprior	3,496 12								20 00	3,516 12
	Pembroke	14,625 62	50 00	177 23	5,222 95			51 40		60 00	20,187 20
	Renfrew	9,315 23								50 00	9,365 23
Peterboro'	Cobourg	16,102 15		1,555 12						60 00	17,717 27
	Lindsay	1,635 71		829 82						40 00	2,505 53
	Port Hope			6,282 57							6,282 57
Prescott	Brockville	9,776 94	50 00	4,841 38	10,173 30	3,661 20				60 00	28,562 82
	Gananoque	5,711 58								40 00	5,751 58
St. Catharines	Port Colborne	1,947 57	50 00	2,217 78						20 00	4,235 35
Stratford	Goderich	3,638 73		675 35							4,314 08
	Kincardine	648 74									648 74

APPENDIX Z.—STATEMENT showing the amount of Excise Revenue collected, &c., during the Year ended 30th June, 1891—*Continued.*

Divisions.	Out-Offices.	Spirits.	Malt Liquor.	Malt.	Tobacco.	Cigars.	Petroleum	Manufactures in Bond.	Seizures.	Other Receipts.	Total.
		$ cts.	$ cts	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Stratford	Palmerston			45,736 73		3,030 00					48,786 73
	Walkerton			2,916 01		3,573 00					6,489 01
Toronto	Barrie and Orillia	3,966 23		6,552 92		1,004 70	9 00			40 00	11,572 85
	Collingwood	11,424 93			6,587 80	268 50				80 00	18,361 23
	Esquising and Georgetown			2,887 00							2,887 00
	Sault Ste. Marie	2,130 89			1,006 70					60 00	3,197 59
	Whitby						84 50				84 50
Windsor	Chatham	12,956 24			3,343 65	745 20					17,045 09
Joliette	Berthier	125 00									125 00
	St. Jacques l'Achigan				2,863 45						2,863 45
Montreal	Valleyfield	3,689 08									3,689 08
Quebec	Gaspé										
	Magdalen Islands				63 50						63 50
	Paspebiac				2,776 80						2,776 80
St. Johns	Granby					25,224 81					25,224 81
Terrebonne	Brownsburg	610 21						50 00		25 00	685 21
	St. Jérôme	8,628 48	25 00						10 00	20 00	8,683 48
Chatham, N.B	Bathurst				726 20						726 20
	Newcastle				5,968 00					20 00	5,988 00
St. John, N.B	Fredericton	48 48			15,136 88					60 00	15,245 36
	Moncton				3,857 50				10 00	20 00	3,887 50
	Sackville				2,826 20					20 00	2,846 20
	Shediac				1,256 80					20 00	1,276 80
	Sussex				1,912 80					20 00	1,932 80
	St. Stephen				9,384 00					40 00	9,424 00
	Woodstock	1,640 79			122 90					20 00	1,783 69
Halifax	Amherst	5,480 74			4,020 65					40 00	9,541 39
	Truro	2,578 25			6,536 30					20 00	9,134 59
	Weymouth				2,002 85					20 00	2,022 85
	Yarmouth				10,636 15					40 00	10,676 15
Picton	Antigonish				2,263 10					20 00	2,283 10
Winnipeg	Brandon	15,015 04			11,745 90					180 00	26,940 94
	Portage la Prairie	6,082 94		1,346 38	2,421 80					40 00	9,891 12
	Rat Portage	8,596 75								40 00	8,636 75
Vancouver	Donald	3,755 76								20 00	3,775 76
	Kamloops	3,289 61			630 00					20 00	3,939 61
	Nelson	504 55								10 00	514 55

Victoria	New Westminster	4,784 01	....	1,466 18	....	3,710 25	....	....	....	20 00	9,980 44
	Revelstoke	1,950 67	....	....	....	....	....	....	....	20 00	1,970 67
	Nanaimo	1,356 74	....	3,527 42	....	1,746 00	....	....	....	10 00	6,540 16

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

FINANCIAL RETURNS, 1890-91.

Dr. Cr.

No. 1.—GENERAL REVENUE ACCOUNT, 1890-91.

Memo. of Refunds deducted below.	Amounts deposited to the credit of the Receiver-General.	Authorized Abatements.	Balances due 30th June, 1891.	Total.	Service.	Revenue of previous years not collected 1st July, 1890.	Revenue Accrued, 1890-1891.	Total.
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.
36,624 49	6,915,963 45		36,061 51	6,952,024 96	Excise and Seizures, per Statement No. 3	165,085 33	6,786,939 63	6,952,024 96
	3,995 52	489 16	27,796 67	32,281 35	Hydraulic and other Rents, per Statement No. 5	28,560 83	3,720 52	32,281 35
	19,439 57	135 00	15,335 82	34,910 39	Minor Public Works, per Statement No. 6	24,323 25	10,587 14	34,910 39
	16,733 14		44,760 29	61,493 43	Culling Timber, per Statement No. 7	41,315 68	20,177 75	61,493 43
	33,662 23		3,796 48	37,458 71	Weights and Measures, per Statements Nos. 19 (A) and 19 (B)	3,036 83	34,421 88	37,458 71
	7,947 90		609 50	8,557 40	Gas Inspection, per Statement No. 20	504 15	8,053 25	8,557 40
	2,645 75			2,645 75	Law Stamps, per Statements Nos. 10 and 18		2,645 75	2,645 75
			45 04	45 04	Bill Stamps, per Statement No. 9	45 04		45 04
	247 00			247 00	Sundry Minor Revenues, per Statement No. 11		247 00	247 00
	38,212 96			38,212 96	Methylated Spirits, Net Receipts		38,212 96	38,212 96
	7,038,847 52			7,167,876 99	Less—Refunds, as per Statement No. 16		6,905,005 88	7,167,876 99
36,624 49	36,624 49			36,624 49			36,624 49	36,624 49
	7,002,223 03	624 16	128,405 31	7,131,252 50	Totals	262,871 11	6,868,381 39	7,131,252 50

E. MIALL,
Commissioner.

Inland Revenue Department,
Ottawa, 17th August, 1891.

Dr.

No. 2.—GENERAL EXPENDITURE

Amounts due to Collectors, &c., 1st July, 1890.	Expenditure authorized by Department.					Amounts due by Collectors, &c., 30th June, 1891.	Total.
	Salaries.	Contingencies.	Seizures.	Cullers' Fees.	Cullers' Annuities.		
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
49 08	288,473 22	89,738 59	1,354 52	....	....	493 98	380,109 39
....	8,250 00	4,678 28	....	8,004 79	7,666 68	75 00	28,674 75
....	....	....	1,554 17	....	....	....	1,554 17
....	8,846 28	20,886 34	....	....	....	....	29,732 62
....	44,094 96	5,941 41	....	....	....	16 66	50,053 03
....	53,567 66	18,728 45	25 11	....	....	193 26	72,514 48
....	12,944 66	6,989 05	....	....	....	212 88	20,146 59
49 08	416,176 78	146,962 12	2,933 80	8,004 79	7,666 68	991 78	582,785 03

Inland Revenue Department,
Ottawa, 17th August, 1891.

ACCOUNT, 1890-91. CR.

SERVICE.	Amounts due by Collectors, &c., 1st July, 1890.	Amounts disbursed by the Receiver-General on requisition of the Department.	Amounts deducted from Salaries for Superannuation.	Amounts due to Collectors, &c., 30th June, 1891.	Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Excise and Seizures, per Statement No. 4....	468 98	374,003 51	5,587 82	49 08	380,109 39
Culling Timber, per Statement No. 8........	75 00	28,448 07	151 68	....	28,674 75
Excise Seizures Distributed, per Statement No. 4, Appendix B....................	....	1,554 17	....	....	1,554 17
Sundry Minor Expenditures, per Statement No. 12..................................	....	29,555 81	176 81	.. ..	29,732 62
Departmental Expenditure, per Statement No. 17.................................	216 66	49,113 11	723 26	....	50,053 03
Weights and Measures, per Statements Nos. 21 (A) and 21 (B)..................	193 26	71,287 33	1,033 89	....	72,514 48
Gas Inspection, per Statement No. 22.......	412 88	19,486 86	246 85	....	20,146 59
................Totals..................	1,366 78	573,448 86	7,920 31	49 08	582,785 03

E. MIALL,
Commissioner.

EXCISE,

Dr.

No. 3.—Collection Divisions,

(For Details,

Balances due 1st July, 1890.	Amounts Accrued during the Year, Including License Fees.							
	Spirits.	Malt Liquor.	Malt.	Tobacco.	Cigars.	Petroleum Inspection Fees.	Bonded Manufactures.	Seizures.
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
23,649 54	55,610 55	100 00	3,075 14	10,717 00	81 00	354 60	....	....
1,502 30	22,734 06	150 00	6,402 74	21,387 10	17,243 93	36 60	901 12	....
185 86	8,613 75	....	....	1,197 30	....	....	....	10 20
491 38	199,168 27	650 00	39,585 00	9,278 25	12,796 95	81 00	....	....
24,405 17	137,017 50	150 00	44,664 15	226,374 23	23,383 66	771 30	5,712 69	50 00
2,126 01	61,646 78	100 00	2,994 27	27,560 18	10,856 76	658 90	1,795 20	0 30
2,715 99	74,296 13	437 00	47,470 37	102,141 78	90,748 71	14,399 90	....	....
....	167,962 96	200 00	1,671 64	35,972 38	1,192 80	2,582 70	....	81 18
26 00	13,804 05	150 00	4,247 20	....	2,784 60	....	....	....
4,217 68	51,825 05	101 40	277 54	5,222 95	....	....	....	....
2,030 84	35,034 96	250 00	10,620 48	1,875 65	1,155 75	....	....	....
....	9,544 23	50 00	288 00	1,023 90	....	1,287 90	....	....
2,172 51	85,828 23	150 00	27,270 67	10,173 30	3,661 20	264 35	300 00	....
3,475 04	21,907 57	100 00	7,866 15	3,368 98	5,304 30	....	....	50 00
5,242 31	21,405 83	450 00	33,319 98	2,076 40	8,409 60	375 20	....	....
4,899 66	506,852 17	4,456 40	176,059 17	258,127 15	47,149 22	4,664 00	12,671 29	200 55
20,198 53	351,242 40	175 00	19,015 23	8,131 58	4,638 90	539 30	....	....
430 23	....	....	....	....	....	....	....	....
97,769 05	1,824,494 49	7,669 80	424,827 73	724.628 13	229,407 38	26,015 75	21,380 30	392 23
3,398 89	11,994 92	100 00	....	9,483 22	232 40	....	....	195 50
23,551 41	807,956 14	500 00	87,670 75	582,840 36	306,636 10	8,754 00	9,422 93	273 25
6,327 86	243,840 18	50 00	11,943 74	142,797 28	949 35	438 90	2,663 77	935 43
45 00	71,232 88	100 00	1,314 64	7,541 76	12,273 36	....	....	....
1,040 21	15,635 67	....	....	637 00	75 00	....	....	50 00
18 00	42,952 74	50 00	....	....	257 10	....	....	100 00
502 80	26,324 23	50 00	....	....	26,762 61	....	....	....
....	9,238 70	75 00	468 90	694 97	....	....	50 00	10 00
3,245 77	33,975 57	50 00	....	356 00	3,097 30	....	....	....
38,129 94	1,263,151 03	975 00	101,398 03	744,350 59	350,283 22	9,192 90	12,136 70	1,564 18
....	....	....	....	5,767 60	....	....	....	30 99
2,274 04	117,138 59	250 00	20,811 93	147,861 20	65 40	29 90	....	267 74
....	....	....	....	10,630 50	....	....	....	....
5,860 50	....	....	....	....	....	....	....	....
8,134 54	117,138 59	250 00	20,811 93	164,259 30	65 40	29 90	....	298 73
....	....	....	....	6,694 20	....	....	....	....
10,472 03	115,512 68	100 00	8,208 55	116,167 13	12,636 12	704 30	1,064 43	60 00
10,472 03	115,512 68	100 00	8,208 55	122,861 33	12,636 12	704 30	1,064 43	60 00
....	28,867 32	475 00	5,461 93	6,562 10	5,928 90	852 05	....	....
6,316 47	56,786 27	525 00	12,777 95	17,112 50	11,849 70	2,215 40	....	111 40
6,316 47	85,653 59	1,000 00	18,239 88	23,674 60	17,778 60	3,067 45	....	111 40
213 80	4,528 46	50 00	1,410 00	41,975 60	....	....	....	....
4,049 50	136,462 71	450 00	16,503 30	105,237 90	5,008 80	1,396 90	....	300 00
165,085 33	3,546,941 55	10,494 80	591,399 42	1,926,987 45	615,179 52	40,407 20	34,581 43	2,726 54
....	9,297 27	1,288 64	20,449 10	4,418 00	826 48	....	....	25 00
....	3,537,644 28	9,206 16	570,950 32	1,922,569 45	614,353 04	40,407 20	34,581 43	2,701 54

Inland Revenue Department, Ottawa, 17th August, 1891.

1890–1891.

in Account with Revenue. **Cr.**

see Appendix A.)

Other Receipts.	Total Duties Accrued.	Total Debits.	Divisions.	Deposited to the Credit of the Receiver-General.	Balances due 30th June, 1891.	Total Credits.
$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.
150 00	70,088 29	93,737 83	Belleville	92,937 42	800 41	93,737 83
395 00	69,250 55	70,752 85	Brantford	70,093 62	659 23	70,752 85
60 00	9,881 25	10,067 11	Cornwall	10,067 11	....	10,067 11
550 00	262,109 47	262,600 85	Guelph	261,951 33	649 52	262,600 85
1,105 00	439,228 53	463,633 70	Hamilton	462,554 41	1,079 29	463,633 70
670 64	106,283 03	108,409 04	Kingston	108,337 33	71 71	108,409 04
455 00	329,948 89	332,664 88	London	331,019 13	1,645 75	332,664 88
110 00	209,773 66	209,773 66	Ottawa	209,773 66	....	209,773 66
60 00	21,045 85	21,071 85	Owen Sound	21,071 85	....	21,071 85
130 00	57,556 94	61,774 62	Perth	61,287 79	486 83	61,774 62
180 00	49,116 84	51,147 68	Peterborough	51,032 57	115 11	51,147 68
100 00	12,294 03	12,294 03	Port Arthur	12,294 03	....	12,294 03
392 32	128,040 07	130,212 58	Prescott	129,647 42	565 16	130,212 58
120 00	38,717 00	42,192 04	St. Catharines	41,588 86	603 18	42,192 04
100 00	66,137 01	71,379 32	Stratford	70,752 32	627 00	71,379 32
4,536 80	1,014,716 75	1,019,616 41	Toronto	1,016,588 05	3,028 36	1,019,616 41
3,622 09	387,364 50	407,563 03	Windsor	406,192 64	1,370 39	407,563 03
....	....	430 23	Suspense Account	....	430 23	430 23
12,736 85	3,271,552 66	3,369,321 71	*Ontario*	3,357,189 54	12,132 17	3,369,321 71
20 12	22,026 16	25,425 05	Joliette	25,425 05	....	25,425 05
2,064 66	1,806,118 19	1,829,669 60	Montreal	1,821,142 52	8,527 08	1,829,669 60
830 00	404,448 65	410,776 51	Quebec	409,685 22	1,091 29	410,776 51
70 00	92,532 64	92,577 64	Sherbrooke	91,519 78	1,057 86	92,577 64
20 00	16,417 67	17,457 88	Sorel	17,457 88	....	17,457 88
40 00	43,399 84	43,417 84	St. Hyacinthe	43,417 84	....	43,417 84
60 00	53,196 84	53,699 64	St. John's	53,699 64	....	53,699 64
45 09	10,582 66	10,582 66	Terrebonne	10,582 66	....	10,582 66
60 00	37,538 87	40,784 64	Three Rivers	40,480 35	304 29	40,784 64
3,209 87	2,486,261 52	2,524,391 46	*Quebec*	2,513,410 94	10,980 52	2,524,391 46
40 00	5,838 59	5,838 59	Cape Breton	5,838 59	....	5,838 59
760 00	287,184 76	289,458 80	Halifax	288,765 06	693 74	289,458 80
20 00	10,650 50	10,650 50	Pictou	10,650 50	....	10,650 50
....	....	5,860 50	Suspense Account	....	5,860 50	5,860 50
820 00	303,673 85	311,808 39	*Nova Scotia*	305,254 15	6,554 24	311,808 39
20 00	6,714 20	6,714 20	Chatham	6,714 20	....	6,714 20
750 00	255,203 21	265,675 24	St. John	264,116 63	1,558 61	265,675 24
770 00	261,917 41	272,389 44	*New Brunswick*	270,830 83	1,558 61	272,389 44
160 00	48,307 30	48,307 30	Vancouver	48,307 30	....	48,307 30
125 00	101,503 22	107,819 69	Victoria	105,088 24	2,731 45	107,819 69
285 00	149,810 52	156,126 99	*British Columbia*	153,395 54	2,731 45	156,126 99
20 00	47,984 06	48,197 86	Charlottetown, *P.E.I.*	47,839 61	358 25	48,197 86
380 00	265,739 61	269,789 11	Winnipeg, *Man*	268,042 84	1,746 27	269,789 11
18,221 72	6,786,939 63	6,952,024 96	Totals	6,915,963 45	36,061 51	6,952,024 96
320 00	36,624 49	....	LESS—Refunds as per Statement No. 16.			
17,901 72	6,750,315 14	....	Net Revenue.			

E. MIALL, *Commissioner.*

EXCISE,

No. 4.—Collection Divisions

(For Details, see

Dr.

Balances due by ollectors, 1st July, 1890.	Amounts received from Department to meet Expenditure.	Deductions from Salaries for Superannuation.	Balances due to Collectors 30th June, 1891.	Total.	Divisions.
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
43 98	7,045 77	123 63	....	7,213 38	Belleville
....	7,137 38	128 68	....	7,266 06	Brantford
....	771 00	14 00	....	785 00	Cornwall
....	13,650 20	249 87	....	13,900 07	Guelph
....	17,753 24	350 04	....	18,103 28	Hamilton
....	8,994 06	160 66	....	9,154 72	Kingston
....	18,128 04	334 21	....	18,462 25	London
....	6,089 04	111 67	....	6,200 71	Ottawa
....	2,436 00	40 86	....	2,476 86	Owen Sound
....	4,550 90	75 98	....	4,626 88	Perth
....	5,378 57	97 43	....	5,476 00	Peterborough
....	1,168 18	20 00	....	1,188 18	Port Arthur
....	11,496 01	216 25	....	11,712 26	Prescott
....	8,481 16	150 48	....	8,631 64	Stratford
....	3,639 70	63 00	....	3,702 70	St. Catharines
75 00	33,938 59	649 64	....	34,663 23	Toronto
....	18,052 82	348 99	49 08	18,450 89	Windsor
....	9,552 87	146 00	....	9,698 87	District Inspectors
118 98	178,263 53	3,281 39	49 08	181,712 98	*Ontario*
....	3,067 65	38 68	....	3,106 33	Joliette
....	43,684 75	798 31	....	44,483 06	Montreal
....	12,108 72	220 16	....	12,328 88	Quebec
....	2,341 01	39 00	....	2,380 01	Sherbrooke
....	1,304 33	15 44	....	1,319 77	Sorel
....	1,300 08	19 10	....	1,319 18	St. Hyacinthe
....	2,182 18	34 01	....	2,216 19	St. John's
....	1,202 47	16 44	....	1,218 91	Terrebonne
....	1,818 65	34 96	....	1,853 61	Three Rivers
....	5,333 40	....	....	5,333 40	District Inspectors
....	74,343 24	1,216 10	....	75,559 34	*Quebec*
50 00	879 37	15 00	....	944 37	Cape Breton
....	10,884 85	199 82	....	11,084 67	Halifax
....	1,891 88	34 96	....	1,926 84	Pictou
....	3,366 47	48 00	....	3,414 47	District Inspector
50 00	17,022 57	297 78	....	17,370 35	*Nova Scotia*
....	1,346 70	26 08	....	1,372 78	Chatham
....	7,548 33	141 66	....	7,689 99	St John
....	982 98	13 88	....	996 86	District Inspector
....	9,878 01	181 62	....	10,059 63	*New Brunswick*
100 00	2,279 45	40 62	....	2,420 07	*Charlottetown, P.E.I.*
200 00	15,273 66	236 30	....	15,709 96	*Winnipeg, Man.*

1890-91.

in Account with Expenditure.

Appendix B.)

Cr.

Balances due to Collectors 1st July, 1890.	EXPENDITURE AUTHORIZED BY DEPARTMENT.						Balances due by Collectors, 30th June, 1891.	Total.
	Salaries.	Seizures Expenditure.	Special Assistance	Rent.	Travelling Expenses.	Sundries.		
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
....	6,341 79	....	....	36 00	293 45	498 16	43 98	7,213 38
....	6,566 16	....	....	74 00	312 25	313 65	....	7,266 06
....	700 00	....	....	....	....	85 00	....	785 00
....	12,676 41	....	....	48 00	644 10	531 56	....	13,900 07
....	17,623 75	....	10 00	....	187 38	282 15	....	18,103 28
....	8,035 00	....	....	270 00	33 92	815 80	....	9,154 72
....	16,721 96	....	....	210 80	294 75	1,234 74	....	18,462 25
....	5,588 41	....	194 54	....	16 60	401 16	....	6,200 71
....	2,223 04	2 95	....	98 50	100 60	51 77	....	2,476 86
....	4,044 34	....	....	130 96	86 90	364 68	....	4,626 88
....	4,949 96	....	....	258 00	34 11	233 93	....	5,476 00
....	1,000 00	....	....	120 00	23 40	44 78	....	1,188 18
....	10,915 26	....	100 00	50 00	31 05	615 95	....	11,712 26
....	7,530 00	....	....	92 00	751 20	258 44	....	8,631 64
....	3,150 00	....	360 00	....	94 40	98 30	....	3,702 70
....	32,900 95	103 66	294 50	....	816 89	547 23	....	34,663 23
49 08	17,781 72	....	28 77	....	296 55	294 77	....	18,450 89
....	7,300 00	....	....	116 65	2,009 75	272 47	....	9,698 87
49 08	166,048 75	106 61	987 81	1,504 91	6,027 30	6,944 54	43 98	181,712 98
....	2,140 55	135 35	6 72	....	184 05	639 66	....	3,106 33
....	40,500 78	335 00	2,051 22	....	600 30	995 76	....	44,483 06
....	11,011 10	325 71	42 47	....	533 39	416 21	....	12,328 88
....	1,950 00	50 00	....	....	299 65	80 36	....	2,380 01
....	1,269 92	9 35	....	....	25 15	15 35	....	1,319 77
....	955 00	24 00	100 00	160 00	21 60	58 58	....	1,319 18
....	1,867 49	....	....	144 00	48 50	156 20	....	2,216 19
....	900 00	....	....	24 00	183 65	111 26	....	1,218 91
....	1,750 00	....	....	....	43 35	60 26	....	1,853 61
....	4,700 00	....	....	....	600 61	32 79	....	5,333 40
....	67,044 84	879 41	2,200 41	328 00	2,540 25	2,566 43	....	75.559 34
....	750 00	113 40	....	....	7 06	23 91	50 00	944 37
....	10,001 03	195 21	....	....	221 01	667 42	....	11,084 67
....	1,750 00	55 39	....	....	30 97	90 48	....	1,926 84
....	2,400 00	....	....	....	794 22	220 25	....	3,414 47
....	14,901 03	364 00	....	....	1,053 26	1,002 06	50 00	17,370 35
....	1,300 00	....	....	....	4 73	68 05	....	1,372 78
....	7,196 62	....	12 90	....	282 30	198 17	....	7,689 99
....	695 38	....	....	....	294 94	6 54	....	996 86
....	9,192 00	....	12 90	....	581 97	272 76	....	10,059 63
....	2,158 02	....	....	....	81 92	80 13	100 00	2,420 07
....	11,954 46	4 50	782 50	630 00	1,549 35	589 15	200 00	15,709 96

EXCISE,

No. 4.—Collection Divisions

Dr. (*For Details, see*

Balances due by Collectors, 1st July, 1890.	Amounts received from Department to meet Expenditure.	Deductions from Salaries for Superannuation.	Balances due to Collectors 30th June, 1891.	Total.	Divisions.
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
....	3,625 85	45 05	....	3,670 90	....Victoria....................
....	2,899 07	36 76	....	2,935 83	....Vancouver....................
....	3,018 40	44 00	....	3,062 40	....District Inspector...............
....	9,543 32	125 81	....	9,669 13	......*British Columbia*..................
....	37,295 47	130 07	....	37,425 54	... General Expenditure..............
....	2,229 79	....	....	2,229 79	...Legal Expenses..................
....	5,171 84	....	....	5,171 84	....Queen's Printer..................
....	1,241 29	....	....	1,241 29	....Stationery....................
....	467 50	....	....	467 50	.. .Lithographing, Engraving, &c.. ....
....	11,912 44	78 13	....	11,990 57	....Preventive Service...............
....	4,076 78	....	....	4,076 78	. Commission to Customs Officers .....
....	118 37	....	....	118 37	... Commission on sale of stamps for Canada Twist..................
....	4,886 25	....	....	4,886 25	....Duty paid to officers in charge of most important establishments..........
468 98	374,003 51	5,587 82	49 08	380,109 39	.... *Grand Totals*...............

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

1890–91.

in Account with Expenditure—*Concluded.*

Appendix B.)

Cr.

Balances due to Collectors, 1st July, 1890.	Expenditure Authorized by Department.						Balances due by Collectors, 30th June, 1891.	Total.
	Salaries.	Seizures Expenditure.	Special Assistance	Rent.	Travelling Expenses.	Sundries.		
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
....	2,258 33	....	979 92	....	177 50	255 15	....	3,670 90
....	1,841 63	....	75 00	300 00	431 80	287 40	....	2,935 83
....	2,200 00	....	....	....	860 90	1 50	....	3,062 40
....	6,299 96	....	1,054 92	300 00	1,470 20	544 05	....	9,669 13
....	6,503 75	....	....	....	2,211 07	28,710 72	....	37,425 54
....	....	....	....	....	....	2,229 79	....	2,229 79
....	....	....	....	....	....	5,171 84	....	5,171 84
....	....	....	....	....	....	1,241 29	....	1,241 29
....	....	....	....	....	....	467 50	....	467 50
....	4,370 41	....	....	....	....	7,520 16	100 00	11,990 57
....	....	....	....	....	....	4,076 78	....	4,076 78
....	....	....	....	....	....	118 37	....	118 37
....	....	....	....	....	....	4,886 25	....	4,886 25
49 08	288,473 22	1,354 52	5,038 54	2,762 91	15,515 32	66,421 82	493 98	380,109 39

E. MIALL,
Commissioner.

HYDRAULIC AND OTHER RENTS.

No. 5.—Summary Statement of Lessees' Accounts, 1890–91.

(*For Details see Appendix A.*)

Dr. Cr.

Balances due 1st July, 1890.	Accrued during the Year ended 30th June, 1891.	Total.	—	Written off by Authority	Deposited to the Credit of the Receiver-General.	Balances due 30th June, 1891.	Total.
$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.
2,465 00	3,469 00	5,934 00	Chaudière Falls and Ottawa River	79 16	3,823 00	2,031 84	5,934 00
40 00	29 52	69 52	St. Lawrence River		11 52	58 00	69 52
410 00		410 00	Burlington Bay	410 00			410 00
597 50	172 00	769 50	Sundry Properties		121 00	648 50	769 50
	40 00	40 00	St. Maurice River		40 00		40 00
	10 00	10 00	Rivière du Lièvre			10 00	10 00
			Land Sales.				
15,573 50		15,573 50	Principal Accounts			15,573 50	15,573 50
9,474 83		9,474 83	Interest do			9,474 83	9,474 83
28,560 83	3,720 52	32,281 35	Totals	489 16	3,995 52	27,796 67	32,281 35

E. MIALL,
Commissioner.

Inland Revenue Department,
Ottawa, 17th August, 1891.

Dr. No. 6.—MINOR PUBLIC WORKS, 1890–91. Cr.

Balances due 1st July, 1890.	Accrued during year ended 30th June, 1891.	Total.	Works.	Authorized Abatements.	Deposited to credit of Receiver-General.	Balances due 30th June, 1891.	Total.
$ cts.	$ cts.	$ cts.	*Bridges.*	$ cts.	$ cts.	$ cts.	$ cts.
2,600 62		2,600 62	Dunnville			2,600 62	2,600 62
			Ferries.				
30 00	10 00	40 00	Bristol	30 00	10 00		40 00
130 00	20 00	150 00	Buckingham and Cumberland		150 00		150 00
50 00	50 00	100 00	Buffalo and Navy Island		75 00	25 00	100 00
	25 00	25 00	Buffalo and Point Albinot		25 00		25 00
4 00	2 00	6 00	Dalhousie			6 00	6 00
	20 00	20 00	Edmundston and Maine		10 00	10 00	20 00
20 00	10 00	30 00	Fitzroy and Onslow		20 00	10 00	30 00
	100 00	100 00	Fort Erie and Buffalo		100 00		100 00
10 00	20 00	30 00	Gower Point and Lapasse		20 00	10 00	30 00
1,736 79		1,736 79	Hull (old lease)			1,736 79	1,736 79
687 50	100 00	787 50	do (new lease)		350 00	437 50	787 50
5 00		5 00	Montebello & St. Thomas d'Alfred	5 00			5 00
920 00		920 00	New Edinburgh and Gatineau (old lease)		145 00	775 00	920 00
1,079 17	150 00	1,229 17	New Edinburgh and Gatineau (new lease)		168 75	1,060 42	1,229 17
100 00		100 00	Niagara and Youngstown	100 00			100 00
2 00	1 00	3 00	Ouillette Street, Detroit		3 00		3 00
10 00		10 00	Papineauville & Brown's Wharf		10 00		10 00
1 00		1 00	Pembroke and Allumette Island (old lease)			1 00	1 00
51 00	51 00	102 00	Pembroke and Allumette Island (new lease)		102 00		102 00
200 00	200 00	400 00	Prescott and Ogdensburg		400 00		400 00
20 00	10 00	30 00	Restigouche			30 00	30 00
20 00	10 00	30 00	Rockland and Lochaber			30 00	30 00
	50 00	50 00	Rockliffe and Gatineau		50 00		50 00
	100 00	100 00	Sault Ste. Marie			100 00	100 00
40 00		40 00	St. Basil			40 00	40 00
	10 00	10 00	St. Leonard and Van Buren		10 00		10 00
	10 00	10 00	Thurso and Clarence		10 00		10 00
			Sundries.				
	100 00	100 00	Custom House, City of Hamilton		100 00		100 00
8,000 00		8,000 00	Dundas & Waterloo Road			8,000 00	8,000 00
3,439 50	231 16	3,670 66	Government Telegraph Lines		3,440 50	230 16	3,670 66
83 33		83 33	Old Post Office Building, Hamilton			83 33	83 33
4,933 34	8,781 98	13,715 32	Old Post Office Building, Montreal		13,715 32		13,715 32
125 00	500 00	625 00	Part of Building, Portland, N.B		500 00	125 00	625 00
25 00	25 00	50 00	Wiarton Docks		25 00	25 00	50 00
24,323 25	10,587 14	34,910 39	Totals	135 00	19,439 57	15,335 82	34,910 39

Inland Revenue Department,
Ottawa, 17th August, 1891.

E. MIALL,
Commissioner.

No. 7.—CULLERS' REVENUE, 1890-91.

DR. (*For Details, see Appendix A.*) CR.

Balances due 1st July, 1890.	Amounts accrued for Measuring and Culling Timber during the Year ended 30th June, 1891.	Total	Offices.	Deposited to the Credit of the Receiver General.	Balances due 30th June, 1891.	Total.
$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.
5,771 80	1,175 63	6,947 43	Montreal	300 50	6,646 93	6,947 43
35,290 91	18,999 44	54,290 35	Quebec	16,432 64	37,857 71	54,290 35
252 97	2 68	255 65	Three Rivers	... .	255 65	255 65
41,315 68	20,177 75	61,493 43	Totals	16,733 14	44,760 29	61,493 43

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

No. 8.—CULLERS' EXPENDITURE, 1890-91.

DR (*For Details, see Appendix B.*) CR.

Balance due by sundry persons, 1st July, 1890.	Received from Department to meet expenditure.	Deducted from Salaries for Superannuation.	Total.	—	Authorized Expenditure. Salaries.	Authorized Expenditure. Contingencies.	Authorized Expenditure. Cullers' Fees.	Authorized Expenditure. Annuities.	Balances due by sundry persons, 30th June, 1891.	Total.
$ cts.	$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
	17,485 09	123 64	17,608 73	Quebec	6,550 00	4,229 57	6,829 16			17,608 73
75 00	2,269 34	18 00	2,362 34	Montreal	900 00	211 71	1,175 63		75 00	2,362 34
	834 46	10 04	844 50	Three Rivers	800 00	44 50				844 50
	7,666 68		7,666 68	Superannuated Cullers				7,666 68		7,666 68
	140 05		140 05	Queen's Printer		140 05				140 05
	52 45		52 45	Stationery Office		52 45				52 45
75 00	28,448 07	151 68	28,674 75	Totals	8,250 00	4,678 28	8,004 79	7,666 68	75 00	28,674 75

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

BILL STAMPS, 1890–91.

Dr. No. 9.—Bill Stamps Distributors in account with Inland Revenue Department. Cr.

Balances, 1st July, 1890.		Total.	—	Balances, 30th June, 1891.		Total.
Stamps on hand.	Cash on hand.			Stamps on hand.	Cash on hand.	
$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.
1,372 77	....	1,372 77	...Post Office Department	1,372 77	....	1,372 77
....	11 54	11 54	.. Belleville, ex-Collector E. R. Benjamin	....	11 54	11 54
....	33 50	33 50	....Three Rivers, ex-Collector B. Lassalle	....	33 50	33 50
160 00	....	160 00	....Col. J. F. McLeod, Fort McLeod	160 00	....	160 00
1,532 77	45 04	1,577 81	........Totals	1,532 77	45 04	1,577 81

LAW STAMPS, 1890–91.

Dr. No. 10.—Law Stamps Distributors in Account with Inland Revenue Department. Cr.

Stamps received from Department.	Total.	—	Commission of 5 per cent. allowed by Department on Stamps sold.	Deposited to Credit of Receiver-General.	Total.
$ cts.	$ cts.		$ cts.	$ cts.	$ cts.
1,834 00	1,834 00	...R. Cassels, Registrar Supreme Court	91 70	1,742 30	1,834 00
951 00	951 00	....L. A. Audette, Registrar Exchequer Court	47 55	903 45	951 00
2,785 00	2,785 00	........Totals	139 25	2,645 75	2,785 00

Inland Revenue Department, Ottawa, 17th August, 1891.

E. MIALL, *Commissioner.*

Dr. No. 11.—SUNDRY MINOR REVENUES, 1890-91. Cr.

Accrued during the year ended 30th June, 1890.	Total.	——	Deposited to the Credit of the Receiver-General.	Total.
$ cts.	$ cts.		$ cts.	$ cts.
211 00	211 00	....Fertilizers' Inspection Fees.	211 00	211 00
36 00	36 00	....Adulteration of Food Fees	36 00	36 00
247 00	247 00	.... Totals.....	247 00	247 00

No. 12.—SUNDRY MINOR EXPENDITURES, 1890-91.

Dr. (*For Details, see Appendix B.*) Cr.

Amounts Received from Department to meet Expenditure.	Deduction from Salaries for Superannuation.	Total.	——	Salaries.	Contingencies.	Queen's Printer.	Stationery.	Total.
$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
67 81	......	67 81	..Minor Public Works....	....	58 93	8 88	. ...	67 81
1,930 41	. .....	1,930 41	..Inspection of Staples....	....	1,926 97	3 44	......	1,930 41
24,548 31	176 81	24,725 12	..Adulteration of Food ...	8,846 28	14,995 22	545 76	337 86	24,725 12
3,009 28	......	3,009 28	..Hydraulic Rents.......	....	3,009 28	......	......	3,009 28
29,555 81	176 81	29,732 62	. ...Totals...........	8,846 28	19,990 40	558 08	337 86	29,732 62

E. MIALL,
Commissioner.

Inland Revenue Department,
Ottawa, 17th August, 1891.

No. 13.—STATEMENT showing the quantities of the several articles subject to 1889, 1890 and 1891, and

ARTICLES SUBJECT TO EXCISE DUTY.	1889.				
	Quantities.			Duty.	
	Ex-Manufactory.	Ex-Warehouse.	Total.		
	Gallons.	Gallons.	Gallons.	$	cts.
Spirits	12,485	2,945,124	2,972,931	3,870,732	43
		15,322 imported.			
Malt Liquor, the duty being paid on Malt	16,352,507		16,352,507	6,309	72
	Lbs.	Lbs.	Lbs.		
Malt	4,205,230	46,906,199	51,111,429	511,114	29
	No.	No.	No.		
Cigars	58,182,720	34,396,850	92,579,570	553,621	56
Cigarettes					
	Lbs.	Lbs.	Lbs.		
Tobacco, from Foreign Leaf	872,946	7,827,486	8,700,432	1,762,246	48
do Canadian Leaf	404,117	308,268	712,385	35,619	25
Snuff	262,235		262,235	37,019	20
Canadian Twist	74,071		74,071	3,703	58
Raw Leaf Tobacco, Foreign		20	20	6	00
do Canadian					
	1,613,369	8,135,774	9,749,143	1,838,594	51
Inspection Fees on Petroleum				35,744	83
Manufactures in Bond				27,133	50
Licenses, Spirits				2,875	00
do Malt Liquor				6,400	00
do Malt				7,125	00
do Cigars				9,550	00
do Tobacco				1,927	50
do Manufactures in Bond				950	00
Totals				6,872,078	34

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

Excise Duty taken for Consumption during the Years ended the 30th June, the Duty collected thereon.

1890.				1891.			
QUANTITIES.			Duty.	QUANTITIES.			Duty.
Ex-Manufactory.	Ex-Warehouse.	Total.		Ex-Manufactory.	Ex-Warehouse.	Total.	
Gallons.	Gallons.	Gallons.	$ cts.	Gallons.	Gallons.	Gallons.	$ cts.
22,590	3,521,194	3,574,799	4,617,643 21	21,177	2,635,924	2,708,841	3,544,191 55
	31,015 imported.				51,740 imported.		
17,196,115	....	17,196,115	7,281 20	18,069,183	....	18,069,183	3,819 80
Lbs.	Lbs.	Lbs.		Lbs.	Lbs.	Lbs.	
3,572,476	51,401,537	54,974,013	549,740 13	2,622,925	55,286,276	57,909,201	584,774 42
No.	No.	No.		No.	No.	No.	
59,503,310	39,307,415	98,810,725	593,710 27	62,083,235	39,033,845	101,117,080	605,017 02
18,226,440	10,764,000	28,990,440	43,508 16	19,406,600	16,660,000	36,066,600	54,737 40
Lbs.	Lbs.	Lbs.		Lbs.	Lbs.	Lbs.	
982,958	7,930,268	8,913,226	1,782,645 50	1,210,109	7,783,940	8,994,049	1,812,037 45
243,517	309,000	552,517	27,625 86	150,267	207,512	357,779	17,888 95
257,600	....	257,600	36,347 84	252,090	....	252,090	35,707 50
79,518	....	79,518	3,975 93	84,624	....	84,624	4,231 20
....	90	90	26 85	....	101½	101½	30 45
....	....	....	....	....	....	....	....
1,563,593	8,239,358	9,802,951	1,850,621 98	1,697,090	7,991,553½	9,688,643½	1,869,895 55
....	....	....	39,737 07	....	....	....	40,407 20
....	....	....	28,734 59	....	....	....	33,656 43
....	....	....	2,750 00	....	....	....	2,750 00
....	....	....	6,350 00	....	....	....	6,675 00
....	....	....	6,625 00	....	....	....	6,625 00
....	....	....	9,762 50	....	....	....	10,162 50
....	....	....	2,229 00	....	....	....	2,354 50
....	....	....	875 00	....	....	....	925 00
....	....	....	7,759,568 11	....	....	....	6,765,991 37

E. MIALL,
Commissioner.

No. 14.—AMOUNTS OF REVENUE deposited monthly to the Credit of the Hon. the Receiver General, on account of Inland Revenue, during the Fiscal Year ended 30th June, 1891.

—	Ontario.	Quebec.	New Brunswick.	Nova Scotia.	Prince Edward Island.	Manitoba and North West.	British Columbia.	Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
JULY :—								
Excise	280,371 91	146,369 11	22,107 90	19,014 40	3,290 40	17,826 04	13,309 57	502,289 33
do Seizures	52 60	3 50				50 00		106 10
Cullers		2,607 29						2,607 29
Hydraulic and other Rents	750 00							750 00
Minor Public Works	463 75	130 00						593 75
Weights and Measures	2,161 48	630 50		42 81		185 30	4 00	3,024 09
Gas	432 65	174 00		89 50		18 25	12 00	726 40
Other Revenues	6 50							6 50
Totals	284,238 89	149,914 40	22,107 90	19,146 71	3,290 40	18,079 59	13,325 57	510,103 46
AUGUST :—								
Excise	221,561 63	163,195 92	16,027 08	20,103 09	3,661 71	17,433 29	8,062 24	450,044 96
do Seizures	22 95	18 25				100 00		141 20
Cullers		2,576 77						2,576 77
Hydraulic and other Rents	120 00							120 00
Minor Public Works	51 00		125 00					176 00
Weights and Measures	1,517 50	822 91	148 12	144 57	50 35	44 07	38 95	2,766 47
do Seizures	5 00							5 00
Gas	233 75	187 00		23 50				444 25
Other Revenues	59 75							59 75
Totals	223,571 58	166,800 85	16,300 20	20,271 16	3,712 06	17,577 36	8,101 19	456,334 40
SEPTEMBER :—								
Excise	253,801 62	193,871 08	23,693 14	24,372 52	3,484 96	21,151 23	12,000 29	532,375 14
do Seizures			10 00	26 97				36 97
Cullers		3,755 38						3,755 38
Hydraulic and other Rents	410 00							410 00
Minor Public Works	100 00							100 00
Weights and Measures	1,405 99	787 02	200 05	97 92	57 50	85 87	66 05	2,700 40
do Seizures		1 18						1 18
Gas	313 25	19 75	17 50	45 50		1 00	11 00	408 00
Other Revenues	373 60							373 60
Totals	256,404 46	198,434 41	23,920 99	24,542 91	3,542 46	21,238 10	12,077 34	540,160 67

OCTOBER:—								
Excise	273,800 09	240,984 50	23,145 31	26,971 20	4,330 71	22,763 46	12,001 53	603,996 80
do Seizures	50 00	4 60				10 00		64 60
Cullers		1,893 18						1,893 18
Hydraulic and other Rents	110 00							110 00
Minor Public Works	35 00		20 00					55 00
Weights and Measures	2,625 05	1,150 01	179 15	113 64	48 05	37 65	37 35	4,190 90
Gas	312 00	215 50	67 75	41 00		2 50	17 50	656 25
Other Revenues	342 75		3 00					345 75
Totals	277,274 89	244,247 79	23,415 21	27,125 84	4,378 76	22,813 61	12,056 38	611,312 48
NOVEMBER:—								
Excise	279,141 88	230,702 34	25,095 11	30,852 15	4,282 16	25,699 27	12,503 42	608,276 33
do Seizures	0 30	40 00		261 76				302 06
Cullers		593 78						593 78
Hydraulic and other Rents	151 00	31 52						182 52
Minor Public Works	303 00	13,715 32	125 00					14,143 32
Weights and Measures	1,608 74	942 73	219 37	27 54	49 91	176 99	14 18	3,039 46
do Seizures	20 00							20 00
Gas	418 25	195 50	21 00			6 00		640 75
do Seizures	30 00							30 00
Other Revenues	244 25							244 25
Totals	281,917 42	246,221 19	25,460 48	31,141 45	4,332 07	25,882 26	12,517 60	627,472 47
DECEMBER:—								
Excise	294,168 78	258,203 43	25,247 56	34,304 00	3,411 08	23,928 38	11,497 15	650,760 38
do Seizures	100 00		50 00					150 00
Cullers		526 82						526 82
Hydraulic and other Rents	1 00							1 00
Minor Public Works	100 00						1 00	101 00
Weights and Measures	1,271 28	549 64	59 31	82 48	18 10	230 38	11 05	2,222 24
Gas	229 75	259 00	8 25	37 25		2 75	13 00	550 00
Other Revenues	287 05	3 00	6 00					296 05
Totals	296,157 86	259,541 89	25,371 12	34,423 73	3,429 18	24,161 51	11,522 20	654,607 49
JANUARY:—								
Excise	280,198 77	192,563 10	19,550 16	23,511 21	3,366 07	20,009 97	11,122 40	550,321 68
do Seizures	10 00	213 40				25 00	40 00	288 40
Hydraulic and other Rents	1,050 00						25 00	1,075 00
Minor Public Works	38 00		125 00					163 00
Weights and Measures	2,243 31	286 90	48 03	70 54	14 95	72 30	10 80	2,746 83
do Seizures	50 00							50 00
Gas	589 50	193 25	147 00			16 00	16 00	951 75
Other Revenues	524 75			15 00				539 75
Totals	284,704 33	193,256 65	19,870 19	23,596 75	3,381 02	20,123 27	11,214 20	556,146 41

No. 14.—AMOUNTS OF REVENUE deposited monthly to the Credit of the Hon. the Receiver General, &c.—*Concluded.*

—	Ontario.	Quebec.	New Brunswick.	Nova Scotia.	Prince Edward Island.	Manitoba and North West.	British Columbia.	Total.
FEBRUARY :—	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Excise	236,001 03	193,743 19	16,217 78	18,928 40	3,172 39	17,265 02	10,353 73	495,681 54
do Seizures		142 10		10 00				152 10
Hydraulic and other Rents	514 00							514 00
Minor Public Works						3,437 50		3,437 50
Weights and Measures	1,329 88	459 58	69 95	43 32	13 95	45 64	11 85	1,974 17
Gas	344 00	205 00	16 75	9 00	7 50			582 25
Other Revenues	206 00	18 00		3 00	17 00			244 00
Totals	238,394 91	194,567 87	16,304 48	18,993 72	3,210 84	20,748 16	10,365 58	502,585 56
MARCH :—								
Excise	230,714 45	187,347 79	20,737 71	23,835 08	3,742 28	22,136 18	12,205 73	500,719 22
do Seizures	75 00	22 20					71 40	168 60
Weights and Measures	699 05	420 57	61 01	25 45	13 00	10 70	9 25	1,239 03
Gas	405 25	153 25	10 25	6 75			5 50	581 00
Other Revenues	225 75	6 00						231 75
Totals	232,119 50	187,949 81	20,808 97	23,867 28	3,755 28	22,146 88	12,291 88	502,939 60
APRIL :—								
Excise	263,153 18	225,327 98	26,260 88	30,731 70	4,604 45	22,985 14	12,870 87	585,934 20
do Seizures	10 00	137 00				115 00		262 00
Hydraulic and other Rents	9 00							9 00
Minor Public Works		30 00						30 00
Weights and Measures	1,990 75	897 29	68 44	93 51	15 90	25 60	6 15	3,097 64
Gas	512 00	181 50	54 00	62 25		5 25	5 00	820 00
Other Revenues	96 00	6 00		1 00				103 00
Totals	265,770 93	226,579 77	26,383 32	30,888 46	4,620 35	23,130 99	12,882 02	590,255 84
MAY :—								
Excise	398,703 45	256,736 35	20,410 73	23,340 75	5,561 71	20,974 76	12,922 22	738,649 97
do Seizures	30 00	983 13						1,013 13
Cullers		794 39						794 39

Hydraulic and other Rents	75 00	....	....	....	....	....	....	75 00
Minor Public Works	50 00	30 00	125 00	....	....	....	....	205 00
Weights and Measures	1,293 87	1,089 45	42 01	123 83	29 60	2 45	19 10	2,600 31
Gas	459 75	212 50	10 50	19 00	5 00	3 50	....	710 25
Other Revenues	225 75	1 00	3 00	1 00	....	....	....	230 75
Totals	400,837 82	259,846 82	20,591 24	23,484 58	5,596 31	20,980 71	12,941 32	744,278 80
JUNE:—								
Excise	345,180 52	222,801 97	32,277 17	28,990 92	4,931 69	35,570 10	24,434 99	694,187 36
do Seizures	41 38	....	....	....	....	....	....	41 38
Cullers	....	3,985 53	....	....	....	....	....	3,985 53
Hydraulic and other Rents	650 00	20 00	3 00	....	....	....	75 00	748 00
Minor Public Works	436 00	....	....	....	....	....	....	436 00
Weights and Measures	1,860 78	1,350 61	332 36	257 01	55 60	17 95	110 20	3,984 51
Gas	374 00	424 50	21 00	....	17 50	....	....	837 00
Other Revenues	200 60	8 00	....	9 00	....	....	....	217 60
Totals	348,743 28	228,590 61	32,633 53	29,256 93	5,004 79	35,588 05	24,620 19	704,437 38
Grand Totals	3,390,135 87	2,555,952 06	273,167 63	306,739 52	48,253 52	272,470 49	153,915 47	7,000,634 56

E. MIALL,
Commissioner.

DEPARTMENT OF INLAND REVENUE,
OTTAWA, 17th August, 1891.

EXCISE

No. 15.—COMPARATIVE Monthly

——		July.	August.	September.	October.	November.
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Spirits	1889-90	361,188 29	324,466 14	340,398 43	404,147 91	368,729 95
	1890-91	129,512 41	187,106 63	258,064 63	311,132 56	320,950 88
Increase, 1890-91						
Decrease, 1890-91		231,675 88	137,359 51	82,333 80	93,015 35	47,779 07
Malt Liquor	1889-90	6,035 60	1,208 40	1,070 00	750 40	476 80
	1890-91	6,646 60	1,282 20	913 60	523 60	308 00
Increase, 1890-91		611 00	73 80			
Decrease, 1890-91				156 40	226 80	168 80
Malt	1889-90	36,262 26	36,148 91	41,598 77	54,408 18	55,889 68
	1890-91	33,433 61	36,721 37	47,376 81	47,406 25	50,661 06
Increase, 1890-91			572 46	5,778 04		
Decrease, 1890-91		2,828 65			7,001 93	5,228 62
Tobacco	1889-90	165,536 45	164,356 86	160,088 80	191,389 99	174,983 77
	1890-91	165,137 66	156,457 14	172,202 06	194,540 77	160,714 42
Increase, 1890-91				12,113 26	3,150 78	
Decrease, 1890-91		398 79	7,899 72			14,269 35
Cigars	1889-90	61,736 76	55,552 53	52,812 54	57,551 53	50,576 20
	1890-91	63,292 18	54,547 47	51,873 00	55,432 77	49,366 59
Increase, 1890-91		1,555 42				
Decrease, 1890-91			1,005 06	939 54	2,118 76	1,209 61
Petroleum	1889-90	2,077 13	2,521 65	4,910 38	5,154 40	4,160 28
	1890-91	1,811 20	2,471 10	5,300 03	5,575 66	4,639 21
Increase, 1890-91				389 65	421 26	478 93
Decrease, 1890-91		265 93	50 55			
Manufactures in Bond	1889-90	1,970 25	1,840 98	2,412 83	2,947 22	2,568 76
	1890-91	2,681 75	2,702 40	3,311 22	3,591 25	3,479 92
Increase, 1890-91		711 50	861 42	898 39	644 03	911 16
Decrease, 1890-91						
Seizures	1889-90	449 80	223 40	263 65	420 00	290 15
	1890-91	106 10	168 17	10 00	68 62	298 04
Increase, 1890-91						7 89
Decrease, 1890-91		343 70	55 23	253 65	351 38	
Other Receipts	1889-90	5,218 45	1,140 00	1,424 41	775 00	1,234 70
	1890-91	5,305 00	1,090 62	1,509 49	1,224 44	1,299 24
Increase, 1890-91		86 55		85 08	449 44	64 54
Decrease, 1890-91			49 38			
Total Increase in 1890-91						
Total Decrease in 1890-91		232,548 48	144,911 77	64,418 97	98,048 71	67,192 93

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

REVENUE.

Statement, 1889-90, 1890-91.

December.	January.	February.	March.	April.	May.	June.	Total.
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
411,405 06	312,758 76	300,134 64	317,765 35	362,623 94	306,117 23	810,657 51	4,620,393 21
412,802 90	289,146 00	263,442 77	281,613 93	297,176 28	469,005 07	325,985 05	3,545,939 11
1,397 84	....	....	....	....	162,887 84	....	....
....	23,612 76	36,691 87	36,151 42	65,447 66	....	484,672 46	1,074,454 10
486 00	653 20	380 00	532 80	696 40	749 60	592 00	13,631 20
256 40	360 00	129 40	25 00	25 00	....	25 00	10,494 80
....	....	....	....	....	....	....	....
229 60	293 20	250 60	507 80	671 40	749 60	567 00	3,136 40
49,804 49	44,414 84	45,593 74	51,917 48	54,585 59	50,976 81	34,764 38	556,365 13
58,492 74	50,352 40	45,786 51	53,897 97	50,319 96	54,681 86	62,268 88	591,399 42
8,688 25	5,937 56	192 77	1,980 49	....	3,705 05	27,504 50	35,034 29
....	....	....	....	4,265 63	....	....	....
145,307 71	120,944 14	117,249 60	143,495 96	171,823 59	175,578 80	165,603 47	1,896,359 14
146,565 64	138,015 63	126,774 87	150,309 55	164,064 58	158,476 00	193,729 13	1,926,987 45
1,257 93	17,071 49	9,525 27	6,813 59	....	....	28,125 66	30,628 31
....	....	....	....	7,759 01	17,102 80	....	....
48,817 30	38,188 35	37,651 38	41,805 90	48,531 99	54,745 23	55,503 06	603,472 77
48,788 34	44,328 13	40,473 57	46.206 77	52,369 57	52,383 16	56,117 97	615,179 52
....	6,139 78	2,822 19	4,400 87	3,837 58	....	614 91	11,706 75
28 96	....	....	....	....	2,362 07	....	....
4,512 15	3,544 27	3,598 55	2,416 63	2,284 97	2,278 28	2,278 38	39,737 07
4,328 01	3,709 68	3,071 61	2,898 05	2,162 44	2,044 95	2,395 26	40,407 20
....	165 41	....	481 42	....	....	116 88	670 13
184 14	....	526 94	....	122 53	233 33	....	....
2,297 14	1,896 13	2,126 72	2,524 18	2,794 34	2,999 62	3,231 42	29,609 59
3,074 84	1,925 60	2,422 39	3,014 79	2,363 63	3,425 68	2,587 96	34,581 43
777 70	29 47	295 67	490 61	....	426 06	....	4,971 84
....	....	....	....	430 71	....	643 46	....
772 04	423 56	143 70	136 85	117 95	73 55	571 45	3,886 10
150 00	288 40	152 10	268 60	162 00	1,023 18	31 33	2,726 54
....	....	8 40	131 75	44 05	949 63	....	....
622 04	135 16	....	....	....	....	540 12	1,159 56
654 95	1,150 00	585 00	1,015 50	605 00	630 60	1,728 05	16,161 66
809 96	1,084 00	723 53	1,028 25	1,568 12	1,129 15	1,449 92	18,221 72
155 01	....	138 53	12 75	963 12	498 55	....	2,060 06
....	66 00	....	....	....	....	278 13	....
11,211 99	5,236 59	....	....	....	148,019 33	....	....
....	....	24,486 58	22,347 74	73,852 19	....	430,339 22	993,678 68

Total Revenue, 1889-90.............. 7,779,615 87
do 1890-91.............. 6,785,937 19

E. MIALL,
Commissioner.

No. 16.—REFUNDS of Revenue during the Fiscal Year ended 30th June, 1891.

EXCISE.

Articles.	To Whom Paid.	Date.	Division.	Under what Authority Refunded.	Amount.	Total.
		1890.			$ cts.	$ cts.
Spirits.	T. J. Lyons	Nov. 4	Prescott	Refunded under Revised Statutes, Cap. 34, Sec. 238	4,620 40	
	Gooderham & Worts	Dec. 18	Toronto	do do do 29 do 78	51 87	
		1891.				
	T. G. Bright & Co	Feb. 5	do	do do do 29 do 78	125 00	
	T. J. Lyons	June 8	Prescott	do do do 34 do 238	4,500 00	9,297 27
		1890.				
Malt Liquor	H. Henser & Co.	Sept. 20	London	do do do 29 do 78	50 00	
	Lowen & Erb	Oct. 2	Victoria	do do do 34 do 178	102 19	
	Hasenfratz & Lawson	do 2	do	do do do 34 do 178	69 66	
	J. C. Oland	do 2	Halifax	do do do 34 do 178	557 49	
	W. N. Wickwire	do 2	do	do do do 34 do 178	419 30	
	L. Langston	Dec. 18	Belleville	do do do 29 do 78	40 00	
		1891.				
	O. H. Allen	Feb. 13	Victoria	do do do 29 do 78	25 00	
	R. Dempster	May 9	Windsor	do do do 29 do 78	25 00	1,288 64
		1890.				
Malt	J. Kormann	July 3	Toronto	do do do 34 do 177	427 68	
	Hasenfratz & Lawson	do 3	Victoria	do do do 34 do 178	24 30	
	W. N. Wickwire	do 3	Halifax	do do do 34 do 178	240 54	
	J. C. Oland	do 3	do	do do do 34 do 178	459 75	
	Lowen & Erb	do 3	Victoria	do do do 34 do 178	52 65	
	D. Morris	do 9	Terrebonne	do do do 29 do 78	4 67	
	A. J. Dawes	do 9	Montreal	do do do 29 do 78	116 99	
	Dow & Co	do 9	do	do do do 29 do 78	189 28	
	C. S. Reinhardt	do 9	do	do do do 29 do 78	47 04	
	J. H. R. Molson	do 9	do	do do do 29 do 78	90 58	

Chrs. Strangman	do	9	do	do	do	do	29	do	78	18	19
J. M. Lottridge	do	10	Hamilton	do	do	do	29	do	78	89	23
J. J. Steele	do	10	do	do	do	do	29	do	78	41	15
M. S. Wilson	do	10	do	do	do	do	29	do	78	76	54
Jas. A. Roy	do	10	Belleville	do	do	do	29	do	78	13	75
Jno. F. Flindall	do	10	do	do	do	do	29	do	78	1	95
J. Kormann	Aug.	4	Toronto	do	do	do	34	do	177	341	28
David Schwan	do	20	Stratford	do	do	do	29	do	78	7	90
Henry Wells	do	20	do	do	do	do	29	do	78	6	12
F. X. Messner	do	20	do	do	do	do	29	do	78	17	44
L. H. Clarke	do	20	do	do	do	do	29	do	78	121	25
Arthur Bixel	do	25	Brantford	do	do	do	29	do	78	40	62
A. Cranston	do	25	Guelph	do	do	do	29	do	78	116	19
Jas. Hewer	do	25	do	do	do	do	29	do	78	2	12
P. Bernhardt	do	25	do	do	do	do	29	do	78	8	50
G. Sleeman	do	25	do	do	do	do	29	do	78	110	96
L. Kuntz	do	25	do	do	do	do	29	do	78	18	92
J. E. Seagram	do	25	do	do	do	do	29	do	78	13	50
Jos. Rau	do	26	do	do	do	do	29	do	78	8	32
C. Huether	do	26	do	do	do	do	29	do	78	9	50
Philip Bajus	do	26	Kingston	do	do	do	29	do	78	8	57
R. Bowie	do	26	Prescott	do	do	do	29	do	78	30	68
John Fisher	do	26	Kingston	do	do	do	29	do	78	11	22
John Labatt	do	26	London	do	do	do	29	do	78	118	78
Henry Henser & Co	do	26	do	do	do	do	29	do	78	14	89
J. McCarthy	do	28	Prescott	do	do	do	29	do	78	50	33
Henry Rudolph	do	28	London	do	do	do	29	do	78	36	00
R. Dempster	do	28	Windsor	do	do	do	29	do	78	17	05
F. H. Walker	do	28	do	do	do	do	29	do	78	119	00
Jas. Bell	do	28	Winnipeg	do	do	do	29	do	78	6	69
Patrick Shea	do	28	do	do	do	do	29	do	78	20	55
E. L. Drewry	do	28	do	do	do	do	29	do	78	76	70
Wm. Blackwood	do	28	do	do	do	do	29	do	78	26	70
Bunster Bros	do	28	Victoria	do	do	do	29	do	78	5	08
Jas. Anderton	do	28	Toronto	do	do	do	29	do	78	19	37
W. J. Thomas	do	28	do	do	do	do	29	do	78	95	82
W. G. Gooderham	do	28	do	do	do	do	29	do	78	90	62
E. O'Keefe	do	28	do	do	do	do	29	do	78	129	00
Thos. Davies	do	28	do	do	do	do	29	do	78	73	12
L. J. Cosgrove	do	28	do	do	do	do	29	do	78	94	42
J. E. Millett	do	28	do	do	do	do	29	do	78	68	55
M. J. Herbert	do	28	do	do	do	do	29	do	78	12	85
Toronto B. & M. Co	do	28	do	do	do	do	29	do	78	60	41
John Brain	do	28	do	do	do	do	29	do	78	16	15
Robt. Davies	do	28	do	do	do	do	29	do	78	175	39
A. Anderson	do	29	Ottawa	do	do	do	29	do	78	6	37
Prescott B. & M. Co	do	29	Prescott	do	do	do	29	do	78	88	77
J. P. Wiser	do	29	do	do	do	do	29	do	78	30	08
Wm. Haslam	do	29	Peterborough	do	do	do	29	do	78	2	50

No. 16.—Refunds of Revenue—*Continued.*

EXCISE—*Continued.*

Articles.	To Whom Paid.	Date.	Division.	Under what Authority Refunded.	Amount.	Total.
		1890.			$ cts.	$ cts.
Malt—*Continued*....	D. McPherson....	Oct. 29..	Peterborough...	Refunded under Revised Statutes, Cap. 29, Sec. 78....	11 07	
	Cyrus Bixel....	do 29..	London....	do do do 29 do 78....	29 02	
	F. H. Carling....	do 29..	do	do do do 29 do 78....	155 41	
	M. R. Todd....	Sept. 2..	Guelph....	do do do 29 do 78....	4 27	
	H. Henser....	do 2..	London....	do do do 34 do 177....	39 80	
	A. Winslow....	do 10..	Peterborough...	do do do 29 do 78....	28 72	
	H. Calcutt....	do 10..	do ...	do do do 29 do 78....	15 67	
	J. Kormann....	do 10..	Toronto....	do do do 34 do 177....	544 68	
	Louis Bernhardt....	Oct. 2..	Guelph....	do do do 29 do 78....	14 65	
	Jas. A. Roy....	do 4..	Belleville....	do do do 29 do 78....	10 40	
	J. J. Steele....	do 8..	Hamilton....	do do do 29 do 78....	20 61	
	Jas. M. Lottridge....	do 8..	do	do do do 29 do 78....	93 90	
	M. S. Wilson....	do 8..	do	do do do 29 do 78....	78 36	
	J. F. Flindall....	do 8..	Belleville....	do do do 29 do 78....	1 95	
	J. C. O'Mullin....	do 22..	Halifax....	do do do 29 do 78....	19 51	
	J. C. Oland....	do 22..	do	do do do 29 do 78....	32 25	
	C. W. Hayward....	do 22..	do	do do do 29 do 78....	17 92	
	W. N. Wickwire....	do 22..	do	do do do 29 do 78....	33 98	
	J. McCarthy....	do 22..	Prescott....	do do do 29 do 78....	60 06	
	B. Bowie....	do 22..	do	do do do 29 do 78....	36 43	
	The Prescott B. & M. Co..	do 22..	do	do do do 29 do 78....	63 56	
	F. H. Carling....	do 22..	London....	do do do 29 do 78....	136 33	
	Henry Henser....	do 22..	do	do do do 29 do 78....	10 80	
	Cyrus Bixel....	do 22..	do	do do do 29 do 78....	35 30	
	John Labatt....	do 22..	do	do do do 29 do 78....	89 35	
	Henry Rudolph....	do 22..	do	do do do 29 do 78....	24 50	
	P. Bernhardt....	do 22..	Guelph....	do do do 29 do 78....	17 37	
	J. McCrea,....	do 22..	do	do do do 29 do 78....	6 00	
	Jos. Rau....	do 22..	do	do do do 29 do 78....	13 12	
	Thos. Holliday....	do 22..	do	do do do 29 do 78....	41 11	
	Louis Kuntz....	do 22..	do	do do do 29 do 78....	21 87	
	C. Heuther....	do 22..	do	do do do 29 do 78....	13 50	
	G. Sleeman....	do 22..	do	do do do 29 do 78....	114 58	
	Arthur Bixel....	do 23..	Brantford....	do do do 29 do 78....	19 86	

James Bell..........	do	23..	Winnipeg..... .	do	do	do	29	do	78....	5	60
W. Blackwood...........	do	23..	do	do	do	do	29	do	78....	3	00
E. L. Drewry.	do	23..	do	do	do	do	29	do	78.. .	63	77
P. Shea	do	23..	do	do	do	do	29	do	78....	18	38
W. N. Wickwire........ ..	do	23..	Halifax.........	do	do	do	29	do	78.. .	24	23
D. Morris	do	23..	Terrebonne.....	do	do	do	29	do	78....	17	95
J. C. Oland.....	do	23..	Halifax	do	do	do	29	do	78....	38	26
C. W. Hayward	do	23..	do	do	do	do	29	do	78....	23	51
J. C. O'Mullin...	do	23..	do	do	do	do	29	do	78....	27	96
R. Dempster.......... ...	do	23..	Windsor........	do	do	do	29	do	78 ...	10	45
F. H. Walker............	do	23..	do	do	do	do	29	do	78....	72	34
Jas. E. Millet.	do	23..	Toronto	do	do	do	29	do	78....	45	00
Robert Davies...........	do	23..	do	do	do	do	29	do	78...	193	05
Wm. J. Thomas	do	23..	do	do	do	do	29	do	78....	81	44
Thos. Davies......... ...	do	23..	do	do	do	do	29	do	78...	39	45
L. J. Cosgrave	do	23..	do	do	do	do	29	do	78....	77	20
Eugene O'Keefe.........	do	23..	do	do	do	do	29	do	78....	104	52
Edwin Brain........... .	do	23..	do	do	do	do	29	do	78....	16	12
J. A. P. Clarke	do	23..	do	do	do	do	29	do	78....	12	59
Jas. Anderton	do	23..	do	do	do	do	29	do	78 ...	25	12
Hergott Bros	do	23..	Stratford...... .	do	do	do	29	do	78 ...	13	78
F. X. Messner...	do	23..	do	do	do	do	29	do	78....	17	06
L. H. Clarke	do	23.	do	do	do	do	29	do	78....	173	80
Estate H. Wells	do	23..	do	do	do	do	29	do	78 ...	5	21
David Schwan.......	do	23..	do	do	do	do	29	do	78 ...	7	90
John Fisher	do	23..	Kingston.......	do	do	do	29	do	78....	12	07
Philip Bajus	do	25..	do	do	do	do	29	do	78....	10	37
J. Kormann	do	29..	Toronto	do	do	do	34	do	177....	475	56
E. E. Williams	do	29..	do	do	do	do	29	do	78....	9	00
L. H. Clarke & Co..	do	29..	do	do	do	do	29	do	78....	340	36
The Toronto B. & M. Co..	do	29..	do	do	do	do	29	do	78....	72	94
Cyril Gwyn	Nov.	4..	Guelph.........	do	do	do	29	do	78....	13	07
A. Cranston..	do	4..	do	do	do	do	29	do	78....	45	90
Martin N. Todd	do	4..	do	do	do	do	29	do	78...	2	95
J. Kormann	do	11..	Toronto	do	do	do	34	do	177....	475	20
A. J. Dawes	do	13..	Montreal........	do	do	do	29	do	78....	38	23
J. Philip Scott	do	13..	do	do	do	do	29	do	78....	71	06
G. Reinhardt & Sons	do	13..	do	do	do	do	29	do	78. ..	44	93
C. Eaton............. ...	do	13..	Owen Sound...	do	do	do	29	do	78....	41	37
H. J. Taylor............	do	13..	St. Catharines..	do	do	do	29	do	78....	285	48
James Ready............	do	13..	St. John........	do	do	do	29	do	78....	103	00
Simeon Jones.......	do	13..	do	do	do	do	29	do	78....	331	05
Geo. Sleeman............	do	13..	Guelph.........	do	do	do	29	do	78 ...	224	69
J. Kormann....	Dec.	9..	Toronto	do	do	do	34	do	177....	214	20
D. Macpherson	do	9..	Peterborough...	do	do	do	29	do	78....	9	75
H. Calcutt..	do	9..	do ...	do	do	do	29	do	78....	14	35
Albert Winslow..........	do	9..	do ...	do	do	do	29	do	78....	45	09
W. H. Haslam....	do	9..	do ...	do	do	do	29	do	78....	7	39
Ambr. Winslow B. & M. Co.	do	17..	do ...	do	do	do	29	do	78...	163	72

No. 16.—Refunds of Revenue.—*Continued.*

EXCISE—*Continued.*

Articles.	To Whom Paid.	Date.	Division.	Under what Authority Refunded.	Amount.	Total.
		1890.			$ cts.	$ cts.
Malt—*Continued* ...	Simeon Jones............	Dec. 17..	St. John..	Refunded under Revised Statutes, Cap. 29, Sec. 78....	141 78	
		1891.				
	The German Brewing Co..	Jan. 15..	Perth.	do do do 29 do 78....	13 80	
	Hasenfratz & Lawson......	do 16..	Victoria........	do do do 34 do 178....	46 17	
	Lowen & Erb...........	do 16..	do	do do do 34 do 178....	20 85	
	J. C. Oland..........	do 16..	Halifax...	do do do 34 do 178....	308 60	
	W. N. Wickwire	do 16..	do	do do do 34 do 178...	351 68	
	Eugene O'Keefe....	do 24..	Toronto	do do do 29 do 78....	202 96	
	Thomas Davies...... ..	do 24..	do	do do do 29 do 78 ...	121 42	
	The Toronto B. & M. Co .	do 24..	do	do do do 29 do 78....	92 54	
	L. J. Cosgrave	do 24..	do	do do do 29 do 78....	114 27	
	Edwin Brain.............	do 24..	do	do do do 29 do 78 ...	17 00	
	W. J. Thomas	do 24..	do	do do do 29 do 78 ...	27 16	
	J. A. P. Clarke.	do 24..	do	do do do 29 do 78....	8 61	
	Jas. Anderton	do 24..	do	do do do 29 do 78....	25 00	
	J. E. Millett.............	do 24..	do	do do do 29 do 78 ...	78 00	
	Robt. Davies...	do 24..	do	do do do 29 do 78....	275 11	
	F. H. Carling....	do 24..	London.... ..	do do do 29 do 78....	151 08	
	H. Rudolph	do 24..	do	do do do 29 do 78 ...	12 00	
	H. Henser & Co..	do 24..	do	do do do 29 do 78 ...	6 50	
	John Labatt	do 24..	do	do do do 29 do 78....	23 44	
	Cyril Bixel	do 24..	do	do do do 29 do 78....	15 72	
	J. M. Lottridge.	do 24..	Hamilton	do do do 29 do 78 ...	79 98	
	Thomas Holliday	do 24 .	Guelph.	do do do 29 do 78....	21 03	
	C. Huether	do 24..	do	do do do 29 do 78....	12 37	
	Louis Kuntz......... .. .	do 24..	do	do do do 29 do 78....	11 46	
	Geo Sleeman......	do 24..	do	do do do 29 do 78....	107 21	
	A. Cranston	do 24..	do	do do do 29 do 78 ...	25 36	
	Jos. Rau	do 24..	do	do do do 29 do 78....	4 12	
	J. E. Seagram	do 24..	do	do do do 29 do 78. ..	15 00	
	A. Bixel	do 24..	Brantford	do do do 29 do 78....	14 80	
	John F. Flindall	do 24..	Belleville... ...	do do do 29 do 78....	1 62	

James A. Roy	do	24	do	do	do	do	29	do	78	4 00
James Bell	do	24	Winnipeg	do	do	do	29	do	78	9 96
Patrick Shea	do	24	do	do	do	do	29	do	78	15 10
Wm. Blackwood	do	24	do	do	do	do	29	do	78	4 50
E. L. Drewry	do	24	do	do	do	do	29	do	78	61 64
Wm. Claugher	do	24	do	do	do	do	29	do	78	8 40
J. C. Oland	do	24	Halifax	do	do	do	29	do	78	50 57
J. C. O'Mullin	do	24	do	do	do	do	29	do	78	28 52
J. Lindberg	do	24	do	do	do	do	29	do	78	9 84
C. W. Hayward	do	24	do	do	do	do	29	do	78	16 95
W. G. Gooderham	do	24	Toronto	do	do	do	29	do	78	74 76
Peter Bernhardt	do	24	Guelph	do	do	do	29	do	78	10 54
F. H. Walker	do	24	Windsor	do	do	do	29	do	78	89 48
F. H. Messner	do	24	Stratford	do	do	do	29	do	78	8 12
Estate, Henry Wells	do	24	do	do	do	do	29	do	78	4 50
David Schwan	do	24	do	do	do	do	29	do	78	3 36
Hergott Bros	do	24	do	do	do	do	29	do	78	8 33
Cyril Gwyn	do	24	Guelph	do	do	do	29	do	78	2 50
J. P. Wiser	do	24	Prescott	do	do	do	29	do	78	30 42
Prescott B. & M. Co	do	24	do	do	do	do	29	do	78	66 21
J. R. McCarthy	do	24	do	do	do	do	29	do	78	68 96
Robt. Bowie	do	24	do	do	do	do	29	do	78	32 87
A. Anderson	do	24	Ottawa	do	do	do	29	do	78	15 56
H. S. Fairall	do	26	Victoria	do	do	do	29	do	78	2 90
W. N. Wickwire	do	27	Halifax	do	do	do	29	do	78	67 00
S. W. Simpson	do	27	Toronto	do	do	do	29	do	78	9 42
J. J. Steele	do	27	Hamilton	do	do	do	29	do	78	37 87
L. H. Clarke	do	27	Stratford	do	do	do	29	do	78	195 46
L. H. Clarke	do	27	Toronto	do	do	do	29	do	78	225 01
M. S. Wilson	do	27	Hamilton	do	do	do	29	do	78	60 15
J. Kormann	do	29	Toronto	do	do	do	34	do	177	112 12
D. Morris	do	30	Terrebonne	do	do	do	29	do	78	5 73
J. McCrea	do	31	Guelph	do	do	do	29	do	78	1 73
Cyrus Bixel	Feb.	5	London	do	do	do	29	do	78	253 15
Geo. Sleeman	do	5	Guelph	do	do	do	29	do	78	350 37
J. C. Oland	do	7	Halifax	do	do	do	34	do	178	119 85
J. Kormann	do	7	Toronto	do	do	do	34	do	177	120 23
F. Barton	do	7	Montreal	do	do	do	29	do	78	13 81
C. S. Reinhardt	do	7	do	do	do	do	29	do	78	20 70
J. Philip Scott	do	7	do	do	do	do	29	do	78	352 35
A. J. Dawes	do	7	do	do	do	do	29	do	78	259 22
J. H. R. Molson	do	7	do	do	do	do	29	do	78	62 85
H. J. Taylor	do	7	St. Catharines	do	do	do	29	do	78	39 35
John Fisher	do	27	Kingston	do	do	do	29	do	78	9 17
Philip Bajus	do	27	do	do	do	do	29	do	78	5 12
Simeon Jones	March	9	St. John	do	do	do	29	do	78	49 00
James Ready	do	9	do	do	do	do	29	do	78	6 00
J. Kormann	do	16	Toronto	do	do	do	34	do	177	148 20
Joseph Luke	do	23	Brantford	do	do	do	29	do	78	61 47

No. 16.—Refunds of Revenue—*Continued.*

EXCISE—*Continued.*

Article.	To whom Paid.	Date.		Division.	Under what Authority Refunded.				Amount.	Total.
		1891.							$ cts.	$ cts.
Malt—*Continued*...	Henry Huether	March	26	Guelph	Refunded under	Revised Statutes,	Cap. 29,	Sec. 78	32 39	
	H. S. Fairall	April	1	Victoria	do	do	do 34	do 178	4 00	
	Hasenfratz & Lawson	do	1	do	do	do	do 34	do 178	40 50	
	C. W. Hayward	do	1	Halifax	do	do	do 34	do 178	30 35	
	J. C. Oland	do	1	do	do	do	do 34	do 178	552 26	
	W. N. Wickwire	do	1	do	do	do	do 34	do 178	292 82	
	D. Macpherson	do	2	Peterborough	do	do	do 29	do 78	3 18	
	W. H. Haslam	do	2	do	do	do	do 29	do 78	3 50	
	Albert Winslow	do	2	do	do	do	do 29	do 78	49 50	
	H. Calcutt	do	3	do	do	do	do 29	do 78	14 30	
	D. Morris	do	7	Terrebonne	do	do	do 29	do 78	2 39	
	John Labatt	do	7	London	do	do	do 29	do 78	48 62	
	J. Kormann	do	25	Toronto	do	do	do 34	do 177	63 68	
	A. Cranston	do	28	Guelph	do	do	do 29	do 78	34 05	
	Arthur Bixel	do	28	Brantford	do	do	do 29	do 78	14 97	
	Louis Bernhardt	do	28	Guelph	do	do	do 29	do 78	8 50	
	Joseph Luke	do	28	Brantford	do	do	do 29	do 78	6 13	
	J. F. Flindall	do	28	Belleville	do	do	do 29	do 78	1 12	
	Jas. A. Roy	do	28	do	do	do	do 29	do 78	15 12	
	E. L. Drewry	do	28	Winnipeg	do	do	do 29	do 78	51 73	
	Wm. Claugher	do	28	do	do	do	do 29	do 78	4 40	
	Patrick Shea	do	28	do	do	do	do 29	do 78	17 51	
	J. C. O'Mullin	do	28	Halifax	do	do	do 29	do 78	11 77	
	J. Lindberg	do	28	do	do	do	do 29	do 78	4 50	
	F. H. Walker	do	28	Windsor	do	do	do 29	do 78	113 05	
	Ls. Griesinger, jun	do	28	do	do	do	do 29	do 78	26 27	
	James Aldred	do	28	do	do	do	do 29	do 78	6 30	
	Jas. Anderton	do	28	Toronto	do	do	do 29	do 78	13 19	
	J. A. P. Clarke	do	28	do	do	do	do 29	do 78	7 51	
	Thos. Davies	do	28	do	do	do	do 29	do 78	96 62	
	Eugene O'Keefe	do	28	do	do	do	do 29	do 78	172 43	
	Wm. G. Gooderham	do	28	do	do	do	do 29	do 78	119 96	
	Edwin Brain	do	28	Toronto	do	do	do 29	do 78	12 00	

E. E. Williams	do	28	do	do	do	do	29	do	78	5	57
Robert Davies	do	28	do	do	do	do	29	do	78	168	96
L. J. Cosgrave	do	28	do	do	do	do	29	do	78	60	27
Hergott Bros.	do	28	Stratford	do	do	do	29	do	78	8	34
Estate Henry Wells.	do	28	do	do	do	do	29	do	78	2	34
Cyril Gwyn	do	28	Guelph	do	do	do	29	do	78	3	16
L. H. Clarke	do	28	do	do	do	do	29	do	78	171	93
Cranmiller & White.	do	28	St. Catharines	do	do	do	29	do	78	96	57
J. McCarthy	do	28	London	do	do	do	29	do	78	51	21
The Prescott B. & M. Co.	do	28	Prescott	do	do	do	29	do	78	33	03
J. P. Wiser	do	28	do	do	do	do	29	do	78	33	85
Henry Calcutt	do	28	Peterborough	do	do	do	29	do	78	8	53
R. Bowie	do	28	Prescott	do	do	do	29	do	78	18	34
D. McPherson	do	28	Peterborough	do	do	do	29	do	78	8	20
Albert Winslow	do	28	do	do	do	do	29	do	78	21	03
W. H. Haslam	do	28	do	do	do	do	29	do	78	2	55
Henry Rudolph.	do	28	London	do	do	do	29	do	78	19	40
Cyrus Bixel.	do	28	do	do	do	do	29	do	78	17	43
John Labatt	do	28	do	do	do	do	29	do	78	129	30
P. Bajus	do	28	Kingston	do	do	do	29	do	78	4	52
John Fisher	do	28	do	do	do	do	29	do	78	12	12
M. S. Wilson	do	28	Hamilton	do	do	do	29	do	78	75	57
J. J. Steel	do	28	do	do	do	do	29	do	78	33	61
J. H. E. Seagram	do	28	Guelph	do	do	do	29	do	78	21	00
F. H. Carling	do	28	London	do	do	do	29	do	78	133	75
P. Bernhardt	do	29	Guelph	do	do	do	29	do	78	8	12
Thos. Holliday	do	29	do	do	do	do	29	do	78	11	82
L. Kuntz	do	29	do	do	do	do	29	do	78	15	60
C. Huether	do	29	do	do	do	do	29	do	78	12	75
G. Sleeman	do	29	do	do	do	do	29	do	78	93	69
M. N. Todd	do	29	do	do	do	do	29	do	78	0	93
F. X. Messner	May	1	Stratford	do	do	do	29	do	78	6	83
David Schwan	do	1	do	do	do	do	29	do	78	6	60
H. J. Taylor	do	1	St. Catharines	do	do	do	29	do	78	51	21
H. Henser & Co	do	1	London	do	do	do	29	do	78	6	70
J. M. Lottridge	do	4	Hamilton	do	do	do	29	do	78	104	94
L. H. Clarke & Co.	do	4	Toronto	do	do	do	29	do	78	195	79
J. Rau	do	4	Guelph	do	do	do	29	do	78	8	25
A. J. Dawes	do	5	Montreal	do	do	do	29	do	78	239	11
Francis Barton	do	5	do	do	do	do	29	do	78	31	90
J. H. R. Molson	do	5	do	do	do	do	29	do	78	152	27
Wm. Dow & Co.	do	5	do	do	do	do	29	do	78	379	52
C. S. Bernhardt.	do	5	do	do	do	do	29	do	78	10	61
The Toronto B. & M. Co.	do	27	Toronto	do	do	do	29	do	78	58	96
C. W. Hayward	do	27	Halifax	do	do	do	29	do	78	5	95
W. N. Wickwire	do	27	do	do	do	do	29	do	78	84	10
J. C. Oland	do	27	do	do	do	do	29	do	78	33	60
Simeon Jones	do	29	St. John	do	do	do	29	do	78	45	00
James Ready	do	29	do	do	do	do	29	do	78	18	00

No. 16.—Refunds of Revenue.—*Continued.*

EXCISE—*Continued.*

Articles.	To whom Paid.	Date.	Division.	Under what Authority Refunded.	Amount.	Total.
		1891.			$ cts.	$ cts.
Malt—*Concluded*...	F. H. Carling............	June 5..	London........	Refunded under Revised Statutes, Cap. 29, Sec. 78....	31 79	
	Peter Henser............	do 5..	do	do do do 34 do 177....	12 00	20,449·10
		1890.				
Tobacco...........	A. A. Boutell............	July 7..	Windsor.. ...	do do do 34 do 259....	14 23	
	J. E. Tuckett & Son......	do 7..	Hamilton	do do do 34 do 259....	46 04	
	B. Houde & Co.	do 8..	Quebec........	do do do 34 do 259....	83 12	
	J. Lemesurier.	do 8..	do	do do do 34 do 259.. .	26 38	
	D. Ritchie & Co	do 23..	Montreal.......	do do do 34 do 259 ...	46 14	
	do	do 30..	do	do do do 34 do 270....	5 25	
	G. T. Tuckett.	Aug. 6..	Hamilton. ...	do do do 34 do 259....	78 76	
	J. A. E. Chaperon.......	do 7..	Windsor..... ..	do do do 34 do 259....	10 99	
	J. Lemesurier.	do 7..	Quebec	do do do 34 do 259....	28 74	
	B. Houde & Co..	do 7..	do	do do do 34 do 259.. .	99 47	
	D. Ritchie & Co	do 9..	Montreal	do do do 34 do 259....	42 12	
	The American Cigarette Co.	do 18..	do	do do do 34 do 259 ...	92 25	
	G. T. Tuckett	Sept. 5..	Hamilton.......	do do do 34 do 259 ..	41 89	
	J. A. E. Chaperon........	do 10..	Windsor..... ..	do do do 34 do 259...	4 73	
	J. Lemesurier.....	do 10..	Quebec........ .	do do do 34 do 259....	27 95	
	B. Houde & Co...........	do 10 .	do	do do do 34 do 259....	91 12	
	do	Oct. 6..	do	do do do 34 do 259....	91 48	
	J. Lemesurier............	do 6.	do	do do do 34 do 259....	29 60	
	G. T. Tuckett....	do 7..	Hamilton	do do do 34 do 259....	65 20	
	The American Cigarette Co.	do 14..	Montreal	do do do 34 do 259....	49 38	
	D. Ritchie & Co	do 14..	do	do do do 34 do 259.. .	41 53	
	do	do 25..	do	do do do 34 do 259.. .	47 25	
	G. T. Tuckett......... ...	Nov. 7..	Hamilton	do do do 34 do 259. .	72 38	
	J. L. Samuel	do 8..	Montreal	do do do 34 do 270 ...	45 00	
	B. Houde & Co..	do 8..	Quebec.........	do do do 34 do 259....	101 87	
	J. Lemesurier............	do 8..	do	do do do 34 do 259....	31 28	
	G. T. Tuckett	Dec. 4..	Hamilton	do do do 34 do 259 ...	55 75	
	B. Houde & Co....	do 5 .	Quebec.........	do do do 34 do 259....	84 24	
	J. Lemesurier.	do 5..	do	do do do 34 do 259...	28 98	

do	do	10	do	do	do	do	34	do	270	11	10
M. Masuret	do	10	London	do	do	do	34	do	259	2	44
D. Ritchie & Co	do	13	Montreal	do	do	do	34	do	259	67	67
The American Cigarette Co.	do	13	do	do	do	do	34	do	259	73	88
D. Ritchie & Co	do	17	do	do	do	do	34	do	259	52	29
The Empire Tobacco Co	do	31	do	do	do	do	34	do	270	8	10
	1891.										
B. Houde & Co	Jan.	16	Quebec	do	do	do	34	do	259	57	52
J. Lemesurier	Jan.	16	Quebec	do	do	do	34	do	259	19	15
Geo. T. Tuckett	do	16	Hamilton	do	do	do	34	do	259	47	67
B. Houde & Co	do	16	Quebec	do	do	do	34	do	270	50	63
J. Lemesurier	do	16	do	do	do	do	34	do	270	35	02
D. Ritchie & Co	do	24	Montreal	do	do	do	34	do	259	17	88
The Empire Tobacco Co	do	24	do	do	do	do	34	do	259	19	05
The American Cigarette Co.	do	24	do	do	do	do	34	do	259	23	78
P. Beneteau	Feb.	5	Windsor	do	do	do	29	do	78	37	50
A. D. Percheron	do	5	Montreal	do	do	do	29	do	78	25	00
M. Masuret	do	5	London	do	do	do	34	do	259	19	21
B. Houde & Co	do	5	Quebec	do	do	do	34	do	259	63	02
J. Lemesurier	do	5	do	do	do	do	34	do	259	13	96
Geo. E. Tuckett & Son	do	5	Hamilton	do	do	do	34	do	259	64	74
M. Masuret	do	17	London	do	do	do	34	do	259	25	68
The American Cigarette Co.	do	19	Montreal	do	do	do	34	do	259	20	53
D. Ritchie & Co	do	19	do	do	do	do	34	do	259	18	08
do	do	19	do	do	do	do	34	do	270	15	00
The Empire Tobacco Co	do	19	do	do	do	do	34	do	270	678	38
do do	do	20	do	do	do	do	34	do	259	84	88
The McAlpin Tobacco Co	do	24	Toronto	do	do	do	34	do	259	135	60
J. L. Samuel	do	25	Montreal	do	do	do	34	do	270	36	15
The Empire Tobacco Co	do	27	do	do	do	do	34	do	270	64	05
B. Houde & Co	March	5	Quebec	do	do	do	34	do	259	68	84
J. Lemesurier	do	5	do	do	do	do	34	do	259	17	03
M. Masuret	do	6	London	do	do	do	34	do	259	12	95
Geo. E. Tuckett & Son	do	9	Hamilton	do	do	do	34	do	259	66	52
D. Ritchie & Co	do	12	Montreal	do	do	do	34	do	270	8	55
do	do	12	do	do	do	do	34	do	259	23	24
The American Cigarette Co.	do	23	do	do	do	do	34	do	259	29	90
J. Lemesurier	April	3	Quebec	do	do	do	34	do	259	19	04
B. Houde & Co	do	3	do	do	do	do	34	do	259	78	73
Geo. T. Tuckett	do	7	Hamilton	do	do	do	34	do	259	13	75
M. Masuret	do	9	London	do	do	do	34	do	259	13	14
E. A. McAlpin	do	10	Toronto	do	do	do	34	do	259	50	46
The Empire Tobacco Co	do	13	Montreal	do	do	do	34	do	259	76	91
B. Goldstein	do	16	do	do	do	do	34	do	259	33	43
do	do	16	do	do	do	do	34	do	270	5	10
D. Ritchie & Co	do	21	do	do	do	do	34	do	259	42	77
M. Masuret	May	6	London	do	do	do	34	do	259	19	68

No. 16.—REFUNDS of Revenue—*Continued.*

EXCISE—*Continued.*

Article.	To whom Paid.	Date.	Division.	Under what Authority Refunded.	Amount.	Total.
		1891.			$ cts.	$ cts.
Tobacco—*Continued.*	Geo. T. Tuckett	May 6	Hamilton	Refunded under Revised Statutes, Cap. 34 Sec. 259	66 56	
	B. Houde & Co.	do 9	Quebec	do do do 34 do 270	7 50	
	do	do 9	do	do do do 34 do 259	88 70	
	J. Lemesurier	do 9	do	do do do 34 do 259	22 53	
	B. Goldstein	do 18	Montreal	do do do 34 do 259	30 94	
	D. Ritchie & Co	do 27	do	do do do 34 do 259	65 68	
	James Henry	do 29	do	do do do 34 do 270	10 50	
	B. Houde & Co.	June 5	Quebec	do do do 34 do 259	96 18	
	J. Lemesurier	do 5	do	do do do 34 do 259	28 31	
	M. Masuret	do 8	London	do do do 34 do 259	3 25	
	Geo. T. Tuckett	do 11	Hamilton	do do do 34 do 259	40 20	
	D. Ritchie & Co	do 12	Montreal	do do do 34 do 259	62 79	
	B. Goldstein	do 12	do	do do do 34 do 259	43 74	
						4,418 00
		1890.				
Cigars	H. Jacobs	July 18	Montreal	do do do 29 do 78	600 00	
	Estate, Jacob Kirchemer	Nov. 17	Brantford	do do do 29 do 78	62 50	
	Joseph Renaud	Dec. 6	Joliette	do do do 29 do 78	56 25	
		1891.				
	E. A. Ashbury	Feb. 5	Windsor	do do do 29 do 78	37 50	
	Marcelin Hay	April 7	Montreal	do do do 29 do 78	15 00	
	John Tacey	do 7	Toronto	do do do 29 do 78	20 83	
	Max Klee	do 7	do	do do do 29 do 78	31 25	
	M. E. Spilling	June 12	do	do do do 34 do 270	3 15	
						826 48
		1890.				
Officer's Salaries	A. H. Badgeron	Sept. 2	Toronto	do do do 29 do 78	300 00	300 00

		1890.						
Bonded Manufactories	E. B. Anderson	July 11..	London.... ...	do	do	do 29 do 78....	10 00	
		1891.						
	W. J. Thomas..........	April 7..	Toronto......	do	do	do 29 do 78....	10 00	20 00
		1890.						
Seizures	Alfred Picard......	July 10..	Three Rivers....	do	do	do 29 do 78 ...	25 00	25 00
					Grand Total ...	....	....	36,624 49

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

No. 17.—DEPARTMENTAL EXPENDITURE, 1890-91.

(For Details, see Appendix B.)

Dr.								Cr.
Due by sundry persons, 1st July, 1890.	Disbursed by the Receiver General.	Deduction for Superannuation.	Total.	—	Salaries.	Contingencies.	Due by sundry persons, 30th June, 1891.	Total.
$ cts.	$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.
....	7,000 00	....	7,000 00	Minister of Inland Revenue	7,000 00	....	....	7,000 00
....	36,371 70	723 26	37,094 96	Departmental Officers	37,094 96	....	....	37,094 96
....	495 18	....	495 18	Subscription to newspapers	....	495 18	....	495 18
....	815 20	....	815 20	Extra Clerks	....	815 20	....	815 20
....	1,066 39	....	1,066 39	Telegraph Companies	....	1,066 39	....	1,066 39
....	889 35	....	889 35	Stationery	....	889 35	....	889 35
....	165 48	....	165 48	Books	....	165 48	....	165 48
....	450 09	....	450 09	Printing	....	450 09	....	450 09
....	199 63	....	199 63	Postage	....	199 63	....	199 63
216 66	1,660 09	....	1,876 75	Sundry persons	....	1,860 09	16 66	1,876 75
216 66	49,113 11	723 26	50,053 03	Totals	44,094 96	5,941 41	16 66	50,053 03

E. MIALL,
Commissioner.

Inland Revenue Department,
Ottawa, 17th August, 1891.

WEIGHTS AND MEASURES, GAS AND LAW STAMPS.

Dr. No. 18.—Statement showing amount of Revenue accrued during Year ended 30th June, 1891. Cr.

—	Weights and Measures Stamps.	Gas Stamps.	Law Stamps.		Total.	—	Weights and Measures Stamps.	Gas Stamps.	Law Stamps.		Total.
			Supreme Court.	Exchequer Court.					Supreme Court.	Exchequer Court.	
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
To amount of Stamps destroyed or returned by Distributors..........	21 12	....	....	....	21 12						
To Commission allowed..........	....	....	91 70	47 55	139 25	By amount of Stamps in the hands of Distributors on 1st July, 1890..........	38,826 30	17,731 65	....	....	56,557 95
To amount of Stamps remaining in hands of Distributors, 30th June, 1891..........	42,199 98	20,508 40	....	....	62,708 38	By Stamps issued by the Inland Revenue Department during the year..........	37,740 50	10,780 00	1,834 00	951 00	51,305 50
To Balance, being the Revenue accrued during 1890-91..........	34,345 70	8,003 25	1,742 30	903 45	44,994 70						
Totals..........	76,566 80	28,511 65	1,834 00	951 00	107,863 45	Totals..........	76,566 80	28,511 65	1,834 00	951 00	107,863 45

E. MIALL,
Commissioner.

Inland Revenue Department,
Ottawa, 17th August, 1891.

WEIGHTS AND MEASURES, 1890-91.

No. 19 (A).—INSPECTORS in Account with Revenue.

DR. CR.

Balances due by Inspectors, 1st July, 1890.		Stamps issued to Inspectors.	Seizures and Penalties.	Total.	Divisions.	Stamps returned or destroyed.	Deposited to credit of Receiver-General.	Balances due by Inspectors, 30th June, 1891.		Total.
Stamps on hand.	Cash on hand.							Stamps on hand.	Cash on hand.	
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
948 66	66 74	2,065 00	10 00	3,090 40	Belleville	6 10	1,300 02	1,691 18	93 10	3,090 40
3,183 35	1,599 97	8,101 00	5 00	12,889 32	Hamilton	15 00	7,359 60	3,803 77	1,710 95	12,889 32
1,648 98	127 89	1,177 00	....	2,953 87	Kingston	....	1,567 99	1,284 03	101 85	2,953 87
1,397 61	286 90	1,260 00	10 00	2,954 51	London	....	2,050 28	779 26	124 97	2,954 51
1,639 92	....	1,090 00	....	2,729 92	Orillia	....	1,185 31	1,544 61	....	2,729 92
404 64	....	2,402 00	....	2,806 64	Ottawa	....	1,316 30	1,490 34	....	2,806 64
2,351 23	....	2,870 00	40 00	5,261 23	Toronto	....	3,044 55	1,886 13	330 55	5,261 23
2,895 15	....	2,455 00	10 00	5,369 15	Windsor	....	2,258 63	3,101 52	....	5,360 15
14,469 54	2,081 50	21,420 00	75 00	38,046 04	*Ontario*	21 10	20,082 68	15,580 84	2,361 42	38,046 04
9,456 65	542 98	6,740 00	1 18	16,740 81	Montreal	0 02	6,790 52	8,986 09	964 18	16,740 81
3,007 21	87 52	2,320 00	....	5,414 73	Quebec	....	1,359 64	3,844 05	211 04	5,414 73
2,691 02	....	800 00	....	3,491 02	Three Rivers	....	1,238 23	2,252 79	....	3,491 02
15,154 88	630 50	9,860 00	1 18	25,646 56	*Quebec*	0 02	9,388 39	15,082 93	1,175 22	25,646 56
906 00	....	930 00	....	1,836 00	Fredericton	....	209 51	1,626 49	....	1,836 00
761 60	....	890 00	....	1,651 60	King's	....	564 89	1,086 71	....	1,651 60
432 36	....	610 00	....	1,042 36	St. John	....	653 40	388 96	....	1,042 36
2,099 96	....	2,430 00	....	4,529 96	*New Brunswick*	....	1,427 80	3,102 16	....	4,529 96
705 51	....	1,040 00	....	1,745 51	Cape Breton	....	230 26	1,515 25	....	1,745 51
553 15	42 81	630 00	....	1,225 96	Halifax	....	552 78	579 51	93 67	1,225 96

715 25	....	455 00	....	1,170 25	....Pictou	....	295 08	875 17	....	1,170 25
235 23	....	30 00	....	265 23	...Yarmouth	....	44 50	220 73	....	265 23
2,209 14	42 81	2,155 00	....	4,406 95	......*Nova Scotia*	....	1,122 62	3,190 66	93 67	4,406 95
358 72	....	377 50	....	736 22	.... *Charlottetown, P.E.I.*	....	366 91	369 31	....	736 22
3,368 89	185 30	1,298 00	....	4,852 19	......*Winnipeg, Man*	....	934 90	3,889 34	27 95	4,852 19
1,165 17	4 00	200 00	....	1,369 17	......*Victoria, B.C.*	....	338 93	984 74	45 50	1,369 17
38,826 30	2,944 11	37,740 50	76 18	79,587 09	.........Grand Totals..........	21 12	33,662 23	42,199 98	3,703 76	79,587 09

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

No. 16.—Refunds of Revenue—*Continued.*

EXCISE—*Continued.*

Article.	To whom Paid.	Date.	Division.	Under what Authority Refunded.	Amount.	Total.
		1891.			$ cts.	$ cts.
Malt—*Continued*...	Henry Huether	March 26	Guelph	Refunded under Revised Statutes, Cap. 29, Sec. 78	32 39	
	H. S. Fairall	April 1	Victoria	do do do 34 do 178	4 00	
	Hasenfratz & Lawson	do 1	do	do do do 34 do 178	40 50	
	C. W. Hayward	do 1	Halifax	do do do 34 do 178	30 35	
	J. C. Oland	do 1	do	do do do 34 do 178	552 26	
	W. N. Wickwire	do 1	do	do do do 34 do 178	292 82	
	D. Macpherson	do 2	Peterborough	do do do 29 do 78	3 18	
	W. H. Haslam	do 2	do	do do do 29 do 78	3 50	
	Albert Winslow	do 2	do	do do do 29 do 78	49 50	
	H. Calcutt	do 3	do	do do do 29 do 78	14 30	
	D. Morris	do 7	Terrebonne	do do do 29 do 78	2 39	
	John Labatt	do 7	London	do do do 29 do 78	48 62	
	J. Kormann	do 25	Toronto	do do do 34 do 177	63 68	
	A. Cranston	do 28	Guelph	do do do 29 do 78	34 05	
	Arthur Bixel	do 28	Brantford	do do do 29 do 78	14 97	
	Louis Bernhardt	do 28	Guelph	do do do 29 do 78	8 50	
	Joseph Luke	do 28	Brantford	do do do 29 do 78	6 13	
	J. F. Flindall	do 28	Belleville	do do do 29 do 78	1 12	
	Jas. A. Roy	do 28	do	do do do 29 do 78	15 12	
	E. L. Drewry	do 28	Winnipeg	do do do 29 do 78	51 73	
	Wm. Claugher	do 28	do	do do do 29 do 78	4 40	
	Patrick Shea	do 28	do	do do do 29 do 78	17 51	
	J. C. O'Mullin	do 28	Halifax	do do do 29 do 78	11 77	
	J. Lindberg	do 28	do	do do do 29 do 78	4 50	
	F. H. Walker	do 28	Windsor	do do do 29 do 78	113 05	
	Ls. Griesinger, jun	do 28	do	do do do 29 do 78	26 27	
	James Aldred	do 28	do	do do do 29 do 78	6 30	
	Jas. Anderton	do 28	Toronto	do do do 29 do 78	13 19	
	J. A. P. Clarke	do 28	do	do do do 29 do 78	7 51	
	Thos. Davies	do 28	do	do do do 29 do 78	96 62	
	Eugene O'Keefe	do 28	do	do do do 29 do 78	172 43	
	Wm. G. Gooderham	do 28	do	do do do 29 do 78	119 96	
	Edwin Brain	do 28	Toronto	do do do 29 do 78	12 00	

E. E. Williams	do	28	do	do	do	do	29	do	78	5	57
Robert Davies	do	28	do	do	do	do	29	do	78	168	96
L. J. Cosgrave	do	28	do	do	do	do	29	do	78	60	27
Hergott Bros.	do	28	Stratford	do	do	do	29	do	78	8	34
Estate Henry Wells	do	28	do	do	do	do	29	do	78	2	34
Cyril Gwyn	do	28	Guelph	do	do	do	29	do	78	3	16
L. H. Clarke	do	28	do	do	do	do	29	do	78	171	93
Cranmiller & White	do	28	St. Catharines	do	do	do	29	do	78	96	57
J. McCarthy	do	28	London	do	do	do	29	do	78	51	21
The Prescott B. & M. Co.	do	28	Prescott	do	do	do	29	do	78	33	03
J. P. Wiser	do	28	do	do	do	do	29	do	78	33	85
Henry Calcutt	do	28	Peterborough	do	do	do	29	do	78	8	53
R. Bowie	do	28	Prescott	do	do	do	29	do	78	18	34
D. McPherson	do	28	Peterborough	do	do	do	29	do	78	8	20
Albert Winslow	do	28	do	do	do	do	29	do	78	21	03
W. H. Haslam	do	28	do	do	do	do	29	do	78	2	55
Henry Rudolph	do	28	London	do	do	do	29	do	78	19	40
Cyrus Bixel	do	28	do	do	do	do	29	do	78	17	43
John Labatt	do	28	do	do	do	do	29	do	78	129	30
P. Bajus	do	28	Kingston	do	do	do	29	do	78	4	52
John Fisher	do	28	do	do	do	do	29	do	78	12	12
M. S. Wilson	do	28	Hamilton	do	do	do	29	do	78	75	57
J. J. Steel	do	28	do	do	do	do	29	do	78	33	61
J. H. E. Seagram	do	28	Guelph	do	do	do	29	do	78	21	00
F. H. Carling	do	28	London	do	do	do	29	do	78	133	75
P. Bernhardt	do	29	Guelph	do	do	do	29	do	78	8	12
Thos. Holliday	do	29	do	do	do	do	29	do	78	11	82
L. Kuntz	do	29	do	do	do	do	29	do	78	15	60
C. Huether	do	29	do	do	do	do	29	do	78	12	75
G. Sleeman	do	29	do	do	do	do	29	do	78	93	69
M. N. Todd	do	29	do	do	do	do	29	do	78	0	93
F. X. Messner	May	1	Stratford	do	do	do	29	do	78	6	83
David Schwan	do	1	do	do	do	do	29	do	78	6	60
H. J. Taylor	do	1	St. Catharines	do	do	do	29	do	78	51	21
H. Henser & Co	do	1	London	do	do	do	29	do	78	6	70
J. M. Lottridge	do	4	Hamilton	do	do	do	29	do	78	104	94
L. H. Clarke & Co	do	4	Toronto	do	do	do	29	do	78	195	79
J. Rau	do	4	Guelph	do	do	do	29	do	78	8	25
A. J. Dawes	do	5	Montreal	do	do	do	29	do	78	239	11
Francis Barton	do	5	do	do	do	do	29	do	78	31	90
J. H. R. Molson	do	5	do	do	do	do	29	do	78	152	27
Wm. Dow & Co.	do	5	do	do	do	do	29	do	78	379	52
C. S. Bernhardt	do	5	do	do	do	do	29	do	78	10	61
The Toronto B. & M. Co.	do	27	Toronto	do	do	do	29	do	78	58	96
C. W. Hayward	do	27	Halifax	do	do	do	29	do	78	5	95
W. N. Wickwire	do	27	do	do	do	do	29	do	78	84	10
J. C Oland	do	27	do	do	do	do	29	do	78	33	60
Simeon Jones	do	29	St. John	do	do	do	29	do	78	45	00
James Ready	do	29	do	do	do	do	29	do	78	18	00

EXCISE

No. 15.—COMPARATIVE Monthly

——		July.	August.	September.	October.	November.
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Spirits	1889-90	361,188 29	324,466 14	340,398 43	404,147 91	368,729 95
	1890-91	129,512 41	187,106 63	258,064 63	311,132 56	320,950 88
Increase, 1890-91						
Decrease, 1890-91		231,675 88	137,359 51	82,333 80	93,015 35	47,779 07
Malt Liquor	1889-90	6,035 60	1,208 40	1,070 00	750 40	476 80
	1890-91	6,646 60	1,282 20	913 60	523 60	308 00
Increase, 1890-91		611 00	73 80			
Decrease, 1890-91				156 40	226 80	168 80
Malt	1889-90	36,262 26	36,148 91	41,598 77	54,408 18	55,889 68
	1890-91	33,433 61	36,721 37	47,376 81	47,406 25	50,661 06
Increase, 1890-91			572 46	5,778 04		
Decrease, 1890-91		2,828 65			7,001 93	5,228 62
Tobacco	1889-90	165,536 45	164,356 86	160,088 80	191,389 99	174,983 77
	1890-91	165,137 66	156,457 14	172,202 06	194,540 77	160,714 42
Increase, 1890-91				12,113 26	3,150 78	
Decrease, 1890-91		398 79	7,899 72			14,269 35
Cigars	1889-90	61,736 76	55,552 53	52,812 54	57,551 53	50,576 20
	1890-91	63,292 18	54,547 47	51,873 00	55,432 77	49,366 59
Increase, 1890-91		1,555 42				
Decrease, 1890-91			1,005 06	939 54	2,118 76	1,209 61
Petroleum	1889-90	2,077 13	2,521 65	4,910 38	5,154 40	4,160 28
	1890-91	1,811 20	2,471 10	5,300 03	5,575 66	4,639 21
Increase, 1890-91				389 65	421 26	478 93
Decrease, 1890-91		265 93	50 55			
Manufactures in Bond	1889-90	1,970 25	1,840 98	2,412 83	2,947 22	2,568 76
	1890-91	2,681 75	2,702 40	3,311 22	3,591 25	3,479 92
Increase, 1890-91		711 50	861 42	898 39	644 03	911 16
Decrease, 1890-91						
Seizures	1889-90	449 80	223 40	263 65	420 00	290 15
	1890-91	106 10	168 17	10 00	68 62	298 04
Increase, 1890-91						7 89
Decrease, 1890-91		343 70	55 23	253 65	351 38	
Other Receipts	1889-90	5,218 45	1,140 00	1,424 41	775 00	1,234 70
	1890-91	5,305 00	1,090 62	1,509 49	1,224 44	1,299 24
Increase, 1890-91		86 55		85 08	449 44	64 54
Decrease, 1890-91			49 38			
Total Increase in 1890-91						
Total Decrease in 1890-91		232,548 48	144,911 77	64,418 97	98,048 71	67,192 93

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

REVENUE.

Statement, 1889-90, 1890-91.

December.	January.	February.	March.	April.	May.	June.	Total.
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts-	$ cts.
411,405 06	312,758 76	300,134 64	317,765 35	362,623 94	306,117 23	810,657 51	4,620,393 21
412,802 90	289,146 00	263,442 77	281,613 93	297,176 28	469,005 07	325,985 05	3,545,939 11
1,397 84	....	....	....	....	162,887 84	....	....
....	23,612 76	36,691 87	36,151 42	65,447 66	....	484,672 46	1,074,454 10
486 00	653 20	380 00	532 80	696 40	749 60	592 00	13,631 20
256 40	360 00	129 40	25 00	25 00	....	25 00	10,494 80
....	....	....	....	....	....	....	....
229 60	293 20	250 60	507 80	671 40	749 60	567 00	3,136 40
49,804 49	44,414 84	45,593 74	51,917 48	54,585 59	50,976 81	34,764 38	556,365 13
58,492 74	50,352 40	45,786 51	53,897 97	50,319 96	54,681 86	62,268 88	591,399 42
8,688 25	5,937 56	192 77	1,980 49	....	3,705 05	27,504 50	35,034 29
....	....	....	....	4,265 63	....	....	....
145,307 71	120,944 14	117,249 60	143,495 96	171,823 59	175,578 80	165,603 47	1,896,359 14
146,565 64	138,015 63	126,774 87	150,309 55	164,064 58	158,476 00	193,729 13	1,926,987 45
1,257 93	17,071 49	9,525 27	6,813 59	....	....	28,125 66	30,628 31
....	....	....	....	7,759 01	17,102 80	....	....
48,817 30	38,188 35	37,651 38	41,805 90	48,531 99	54,745 23	55,503 06	603,472 77
48,788 34	44,328 13	40,473 57	46.206 77	52,369 57	52,383 16	56,117 97	615,179 52
....	6,139 78	2,822 19	4,400 87	3,837 58	....	614 91	11,706 75
28 96	....	....	....	....	2,362 07	....	....
4,512 15	3,544 27	3,598 55	2,416 63	2,284 97	2,278 28	2,278 38	39,737 07
4,328 01	3,709 68	3,071 61	2,898 05	2,162 44	2,044 95	2,395 26	40,407 20
....	165 41	....	481 42	....	....	116 88	670 13
184 14	....	526 94	....	122 53	233 33	....	....
2,297 14	1,896 13	2,126 72	2,524 18	2,794 34	2,999 62	3,231 42	29,609 59
3,074 84	1,925 60	2,422 39	3,014 79	2,363 63	3,425 68	2,587 96	34,581 43
777 70	29 47	295 67	490 61	....	426 06	....	4,971 84
....	....	....	....	430 71	....	643 46	....
772 04	423 56	143 70	136 85	117 95	73 55	571 45	3,886 10
150 00	288 40	152 10	268 60	162 00	1,023 18	31 33	2,726 54
....	....	8 40	131 75	44 05	949 63	....	....
622 04	135 16	....	....	....	....	540 12	1,159 56
654 95	1,150 00	585 00	1,015 50	605 00	630 60	1,728 05	16,161 66
809 96	1,084 00	723 53	1,028 25	1,568 12	1,129 15	1,449 92	18,221 72
155 01	....	138 53	12 75	963 12	498 55	....	2,060 06
....	66 00	....	....	....	....	278 13	....
11,211 99	5,236 59	....	....	....	148,019 33	....	....
....	....	24,486 58	22,347 74	73,852 19	....	430,339 22	993,678 68

Total Revenue, 1889-90..................	7,779,615 87
do 1890-91..................	6,785,937 19

E. MIALL,
Commissioner.

No. 16.—Refunds of Revenue during the Fiscal Year ended 30th June, 1891.

EXCISE.

Articles.	To Whom Paid.	Date.	Division.	Under what Authority Refunded.	Amount.	Total.
		1890.			$ cts.	$ cts.
Spirits.	T. J. Lyons.............	Nov. 4..	Prescott	Refunded under Revised Statutes, Cap. 34, Sec. 238....	4,620 40	
	Gooderham & Worts.....	Dec. 18..	Toronto........	do do do 29 do 78....	51 87	
		1891.				
	T. G. Bright & Co........	Feb. 5..	do	do do do 29 do 78 . .	125 00	
	T. J. Lyons..............	June 8..	Prescott..	do do do 34 do 238....	4,500 00	9,297 27
		1890.				
Malt Liquor.... .	H. Henser & Co....	Sept. 20..	London.........	do do do 29 do 78 ...	50 00	
	Lowen & Erb	Oct. 2..	Victoria	do do do 34 do 178....	102 19	
	Hasenfratz & Lawson.....	do 2..	do	do do do 34 do 178....	69 66	
	J. C. Oland..........	do 2..	Halifax........	do do do 34 do 178 ...	557 49	
	W. N. Wickwire	do 2..	do	do do do 34 do 178....	419 30	
	L. Langston	Dec. 18..	Belleville.....	do do do 29 do 78....	40 00	
		1891.				
	O. H. Allen..............	Feb. 13..	Victoria	do do do 29 do 78....	25 00	
	R. Dempster..	May 9..	Windsor	do do do 29 do 78....	25 00	1,288 64
		1890.				
Malt	J. Kormann	July 3..	Toronto	do do do 34 do 177....	427 68	
	Hasenfratz & Lawson......	do 3..	Victoria	do do do 34 do 178....	24 30	
	W. N. Wickwire...	do 3..	Halifax........	do do do 34 do 178....	240 54	
	J. C. Oland..............	do 3..	do	do do do 34 do 178....	459 75	
	Lowen & Erb.	do 3..	Victoria	do do do 34 do 178....	52 65	
	D. Morris	do 9..	Terrebonne.... .	do do do 29 do 78....	4 67	
	A. J. Dawes	do 9..	Montreal.. .. .	do do do 29 do 78. ..	116 99	
	Dow & Co	do 9..	do	do do do 29 do 78....	189 28	
	C. S. Reinhardt......	do 9..	do	do do do 29 do 78. ..	47 04	
	J. H. R. Molson....... .	do 9..	do	do do do 29 do 78....	90 58	

Chrs. Strangman	do	9	do	do	do	do	29	do	78	18	19
J. M. Lottridge	do	10	Hamilton	do	do	do	29	do	78	89	23
J. J. Steele	do	10	do	do	do	do	29	do	78	41	15
M. S. Wilson	do	10	do	do	do	do	29	do	78	76	54
Jas. A. Roy	do	10	Belleville	do	do	do	29	do	78	13	75
Jno. F. Flindall	do	10	do	do	do	do	29	do	78	1	95
J. Kormann	Aug.	4	Toronto	do	do	do	34	do	177	341	28
David Schwan	do	20	Stratford	do	do	do	29	do	78	7	90
Henry Wells	do	20	do	do	do	do	29	do	78	6	12
F. X. Messner	do	20	do	do	do	do	29	do	78	17	44
L. H. Clarke	do	20	do	do	do	do	29	do	78	121	25
Arthur Bixel	do	25	Brantford	do	do	do	29	do	78	40	62
A. Cranston	do	25	Guelph	do	do	do	29	do	78	116	19
Jas. Hewer	do	25	do	do	do	do	29	do	78	2	12
P. Bernhardt	do	25	do	do	do	do	29	do	78	8	50
G. Sleeman	do	25	do	do	do	do	29	do	78	110	96
L. Kuntz	do	25	do	do	do	do	29	do	78	18	92
J. E. Seagram	do	25	do	do	do	do	29	do	78	13	50
Jos. Rau	do	26	do	do	do	do	29	do	78	8	32
C. Huether	do	26	do	do	do	do	29	do	78	9	50
Philip Bajus	do	26	Kingston	do	do	do	29	do	78	8	57
R. Bowie	do	26	Prescott	do	do	do	29	do	78	30	68
John Fisher	do	26	Kingston	do	do	do	29	do	78	11	22
John Labatt	do	26	London	do	do	do	29	do	78	118	78
Henry Henser & Co	do	26	do	do	do	do	29	do	78	14	89
J. McCarthy	do	28	Prescott	do	do	do	29	do	78	50	33
Henry Rudolph	do	28	London	do	do	do	29	do	78	36	00
R. Dempster	do	28	Windsor	do	do	do	29	do	78	17	05
F. H. Walker	do	28	do	do	do	do	29	do	78	119	00
Jas. Bell	do	28	Winnipeg	do	do	do	29	do	78	6	69
Patrick Shea	do	28	do	do	do	do	29	do	78	20	55
E. L. Drewry	do	28	do	do	do	do	29	do	78	76	70
Wm. Blackwood	do	28	do	do	do	do	29	do	78	26	70
Bunster Bros	do	28	Victoria	do	do	do	29	do	78	5	08
Jas. Anderton	do	28	Toronto	do	do	do	29	do	78	19	37
W. J. Thomas	do	28	do	do	do	do	29	do	78	95	82
W. G. Gooderham	do	28	do	do	do	do	29	do	78	90	62
E. O'Keefe	do	28	do	do	do	do	29	do	78	129	00
Thos. Davies	do	28	do	do	do	do	29	do	78	73	12
L. J. Cosgrove	do	28	do	do	do	do	29	do	78	94	42
J. E. Millett	do	28	do	do	do	do	29	do	78	68	55
M. J. Herbert	do	28	do	do	do	do	29	do	78	12	85
Toronto B. & M. Co	do	28	do	do	do	do	29	do	78	60	41
John Brain	do	28	do	do	do	do	29	do	78	16	15
Robt. Davies	do	28	do	do	do	do	29	do	78	175	39
A. Anderson	do	29	Ottawa	do	do	do	29	do	78	6	37
Prescott B. & M. Co	do	29	Prescott	do	do	do	29	do	78	88	77
J. P. Wiser	do	29	do	do	do	do	29	do	78	30	08
Wm. Haslam	do	29	Peterborough	do	do	do	29	do	78	2	50

No. 16.—Refunds of Revenue—*Continued.*

EXCISE—*Continued.*

Articles.	To Whom Paid.	Date.	Division.	Under what Authority Refunded.	Amount.	Total.
		1890.			$ cts.	$ cts.
Malt—*Continued*....	D. McPherson	Oct. 29..	Peterborough...	Refunded under Revised Statutes, Cap. 29, Sec. 78....	11 07	
	Cyrus Bixel	do 29..	London	do do do 29 do 78....	29 02	
	F. H. Carling	do 29..	do	do do do 29 do 78....	155 41	
	M. R. Todd	Sept. 2..	Guelph	do do do 29 do 78..	4 27	
	H. Henser	do 2..	London	do do do 34 do 177....	39 80	
	A. Winslow	do 10..	Peterborough...	do do do 29 do 78....	28 72	
	H. Calcutt.	do 10..	do	do do do 29 do 78....	15 67	
	J. Kormann	do 10..	Toronto	do do do 34 do 177....	544 68	
	Louis Bernhardt	Oct. 2..	Guelph	do do do 29 do 78..	14 65	
	Jas. A. Roy	do 4..	Belleville	do do do 29 do 78....	10 40	
	J. J. Steele	do 8..	Hamilton	do do do 29 do 78...	20 61	
	Jas. M. Lottridge	do 8..	do	do do do 29 do 78....	93 90	
	M. S. Wilson	do 8..	do	do do do 29 do 78...	78 36	
	J. F. Flindall	do 8..	Belleville	do do do 29 do 78....	1 95	
	J. C. O'Mullin	do 22..	Halifax	do do do 29 do 78....	19 51	
	J. C. Oland	do 22..	do	do do do 29 do 78...	32 25	
	C. W. Hayward	do 22..	do	do do do 29 do 78....	17 92	
	W. N. Wickwire	do 22..	do	do do do 29 do 78....	33 98	
	J. McCarthy	do 22..	Prescott	do do do 29 do 78....	60 06	
	B. Bowie	do 22..	do	do do do 29 do 78...	36 43	
	The Prescott B. & M. Co..	do 22..	do	do do do 29 do 78....	63 56	
	F. H. Carling	do 22.	London	do do do 29 do 78....	136 33	
	Henry Henser	do 22..	do	do do do 29 do 78....	10 80	
	Cyrus Bixel	do 22..	do	do do do 29 do 78....	35 30	
	John Labatt	do 22..	do	do do do 29 do 78..	89 35	
	Henry Rudolph	do 22..	do	do do do 29 do 78...	24 50	
	P. Bernhardt	do 22..	Guelph	do do do 29 do 78...	17 37	
	J. McCrea,	do 22..	do	do do do 29 do 78....	6 00	
	Jos. Rau	do 22..	do	do do do 29 do 78...	13 12	
	Thos. Holliday	do 22..	do	do do do 29 do 78....	41 11	
	Louis Kuntz	do 22..	do	do do do 29 do 78...	21 87	
	C. Heuther	do 22..	do	do do do 29 do 78....	13 50	
	G. Sleeman	do 22..	do	do do do 29 do 78....	114 58	
	Arthur Bixel	do 23..	Brantford	do do do 29 do 78....	19 86	

James Bell	do	23	Winnipeg	do	do	do	29	do	78	5	60
W. Blackwood	do	23	do	do	do	do	29	do	78	3	00
E. L. Drewry	do	23	do	do	do	do	29	do	78	63	77
P. Shea	do	23	do	do	do	do	29	do	78	18	38
W. N. Wickwire	do	23	Halifax	do	do	do	29	do	78	24	23
D. Morris	do	23	Terrebonne	do	do	do	29	do	78	17	95
J. C. Oland	do	23	Halifax	do	do	do	29	do	78	38	26
C. W. Hayward	do	23	do	do	do	do	29	do	78	23	51
J. C. O'Mullin	do	23	do	do	do	do	29	do	78	27	96
R. Dempster	do	23	Windsor	do	do	do	29	do	78	10	45
F. H. Walker	do	23	do	do	do	do	29	do	78	72	34
Jas. E. Millet	do	23	Toronto	do	do	do	29	do	78	45	00
Robert Davies	do	23	do	do	do	do	29	do	78	193	05
Wm. J. Thomas	do	23	do	do	do	do	29	do	78	81	44
Thos. Davies	do	23	do	do	do	do	29	do	78	39	45
L. J. Cosgrave	do	23	do	do	do	do	29	do	78	77	20
Eugene O'Keefe	do	23	do	do	do	do	29	do	78	104	52
Edwin Brain	do	23	do	do	do	do	29	do	78	16	12
J. A. P. Clarke	do	23	do	do	do	do	29	do	78	12	59
Jas. Anderton	do	23	do	do	do	do	29	do	78	25	12
Hergott Bros	do	23	Stratford	do	do	do	29	do	78	13	78
F. X. Messner	do	23	do	do	do	do	29	do	78	17	06
L. H. Clarke	do	23	do	do	do	do	29	do	78	173	80
Estate H. Wells	do	23	do	do	do	do	29	do	78	5	21
David Schwan	do	23	do	do	do	do	29	do	78	7	90
John Fisher	do	23	Kingston	do	do	do	29	do	78	12	07
Philip Bajus	do	25	do	do	do	do	29	do	78	10	37
J. Kormann	do	29	Toronto	do	do	do	34	do	177	475	56
E. E. Williams	do	29	do	do	do	do	29	do	78	9	00
L. H. Clarke & Co	do	29	do	do	do	do	29	do	78	340	36
The Toronto B. & M. Co	do	29	do	do	do	do	29	do	78	72	94
Cyril Gwyn	Nov.	4	Guelph	do	do	do	29	do	78	13	07
A. Cranston	do	4	do	do	do	do	29	do	78	45	90
Martin N. Todd	do	4	do	do	do	do	29	do	78	2	95
J. Kormann	do	11	Toronto	do	do	do	34	do	177	475	20
A. J. Dawes	do	13	Montreal	do	do	do	29	do	78	38	23
J. Philip Scott	do	13	do	do	do	do	29	do	78	71	06
G. Reinhardt & Sons	do	13	do	do	do	do	29	do	78	44	93
C. Eaton	do	13	Owen Sound	do	do	do	29	do	78	41	37
H. J. Taylor	do	13	St. Catharines	do	do	do	29	do	78	285	48
James Ready	do	13	St. John	do	do	do	29	do	78	103	00
Simeon Jones	do	13	do	do	do	do	29	do	78	331	05
Geo. Sleeman	do	13	Guelph	do	do	do	29	do	78	224	69
J. Kormann	Dec.	9	Toronto	do	do	do	34	do	177	214	20
D. Macpherson	do	9	Peterborough	do	do	do	29	do	78	9	75
H. Calcutt	do	9	do	do	do	do	29	do	78	14	35
Albert Winslow	do	9	do	do	do	do	29	do	78	45	09
W. H. Haslam	do	9	do	do	do	do	29	do	78	7	39
Ambr. Winslow B. & M. Co.	do	17	do	do	do	do	29	do	78	163	72

No. 16.—Refunds of Revenue.—*Continued.*

EXCISE—*Continued.*

Articles.	To Whom Paid.	Date.	Division.	Under what Authority Refunded.	Amount.	Total.
		1890.			$ cts.	$ cts.
Malt—*Continued*...	Simeon Jones............	Dec. 17..	St. John..	Refunded under Revised Statutes, Cap. 29, Sec. 78....	141 78	
		1891.				
	The German Brewing Co..	Jan. 15..	Perth.	do do do 29 do 78....	13 80	
	Hasenfratz & Lawson......	do 16..	Victoria........	do do do 34 do 178. ..	46 17	
	Lowen & Erb...........	do 16..	do	do do do 34 do 178....	20 85	
	J. C. Oland..	do 16..	Halifax...	do do do 34 do 178....	308 60	
	W. N. Wickwire	do 16..	do	do do do 34 do 178....	351 68	
	Eugene O'Keefe....	do 24..	Toronto	do do do 29 do 78....	202 96	
	Thomas Davies...... ..	do 24..	do	do do do 29 do 78 ...	121 42	
	The Toronto B. & M. Co .	do 24..	do	do do do 29 do 78....	92 54	
	L. J. Cosgrave	do 24..	do	do do do 29 do 78....	114 27	
	Edwin Brain............	do 24..	do	do do do 29 do 78 ...	17 00	
	W. J. Thomas	do 24..	do	do do do 29 do 78 ...	27 16	
	J. A. P. Clarke..........	do 24..	do	do do do 29 do 78....	8 61	
	Jas. Anderton	do 24..	do	do do do 29 do 78....	25 00	
	J. E. Millett.............	do 24..	do	do do do 29 do 78 ...	78 00	
	Robt. Davies...	do 24..	do	do do do 29 do 78....	275 11	
	F. H. Carling....	do 24..	London.... . ..	do do do 29 do 78....	151 08	
	H. Rudolph	do 24..	do	do do do 29 do 78 ...	12 00	
	H. Henser & Co..	do 24..	do	do do do 29 do 78 ...	6 50	
	John Labatt	do 24..	do	do do do 29 do 78....	23 44	
	Cyril Bixel	do 24..	do	do do do 29 do 78....	15 72	
	J. M. Lottridge.	do 24..	Hamilton.......	do do do 29 do 78 ...	79 98	
	Thomas Holliday	do 24 .	Guelph.	do do do 29 do 78....	21 03	
	C. Huether.......... ...	do 24..	do	do do do 29 do 78....	12 37	
	Louis Kuntz......... .. .	do 24..	do	do do do 29 do 78....	11 46	
	Geo Sleeman.......	do 24..	do	do do do 29 do 78....	107 21	
	A. Cranston	do 24..	do	do do do 29 do 78 ...	25 36	
	Jos. Rau	do 24..	do	do do do 29 do 78....	4 12	
	J. E. Seagram	do 24..	do	do do do 29 do 78....	15 00	
	A. Bixel	do 24..	Brantford	do do do 29 do 78....	14 80	
	John F. Flindall	do 24..	Belleville... ...	do do do 29 do 78....	1 62	

James A. Roy	do	24	do	do	do	do	29	do	78	4	00
James Bell	do	24	Winnipeg	do	do	do	29	do	78	9	96
Patrick Shea	do	24	do	do	do	do	29	do	78	15	10
Wm. Blackwood	do	24	do	do	do	do	29	do	78	4	50
E. L. Drewry	do	24	do	do	do	do	29	do	78	61	64
Wm. Claugher	do	24	do	do	do	do	29	do	78	8	40
J. C. Oland	do	24	Halifax	do	do	do	29	do	78	50	57
J. C. O'Mullin	do	24	do	do	do	do	29	do	78	28	52
J. Lindberg	do	24	do	do	do	do	29	do	78	9	84
C. W. Hayward	do	24	do	do	do	do	29	do	78	16	95
W. G. Gooderham	do	24	Toronto	do	do	do	29	do	78	74	76
Peter Bernhardt	do	24	Guelph	do	do	do	29	do	78	10	54
F. H. Walker	do	24	Windsor	do	do	do	29	do	78	89	48
F. H. Messner	do	24	Stratford	do	do	do	29	do	78	8	12
Estate, Henry Wells	do	24	do	do	do	do	29	do	78	4	50
David Schwan	do	24	do	do	do	do	29	do	78	3	36
Hergott Bros.	do	24	do	do	do	do	29	do	78	8	33
Cyril Gwyn	do	24	Guelph	do	do	do	29	do	78	2	50
J. P. Wiser	do	24	Prescott	do	do	do	29	do	78	30	42
Prescott B. & M. Co	do	24	do	do	do	do	29	do	78	66	21
J. R. McCarthy	do	24	do	do	do	do	29	do	78	68	96
Robt. Bowie	do	24	do	do	do	do	29	do	78	32	87
A. Anderson	do	24	Ottawa	do	do	do	29	do	78	15	56
H. S. Fairall	do	26	Victoria	do	do	do	29	do	78	2	90
W. N. Wickwire	do	27	Halifax	do	do	do	29	do	78	67	00
S. W. Simpson	do	27	Toronto	do	do	do	29	do	78	9	42
J. J. Steele	do	27	Hamilton	do	do	do	29	do	78	37	87
L. H. Clarke	do	27	Stratford	do	do	do	29	do	78	195	46
L. H. Clarke	do	27	Toronto	do	do	do	29	do	78	225	01
M. S. Wilson	do	27	Hamilton	do	do	do	29	do	78	60	15
J. Kormann	do	29	Toronto	do	do	do	34	do	177	112	12
D. Morris	do	30	Terrebonne	do	do	do	29	do	78	5	73
J. McCrea	do	31	Guelph	do	do	do	29	do	78	1	73
Cyrus Bixel	Feb.	5	London	do	do	do	29	do	78	253	15
Geo. Sleeman	do	5	Guelph	do	do	do	29	do	78	350	37
J. C. Oland	do	7	Halifax	do	do	do	34	do	178	119	85
J. Kormann	do	7	Toronto	do	do	do	34	do	177	120	23
F. Barton	do	7	Montreal	do	do	do	29	do	78	13	81
C. S. Reinhardt	do	7	do	do	do	do	29	do	78	20	70
J. Philip Scott	do	7	do	do	do	do	29	do	78	352	35
A. J. Dawes	do	7	do	do	do	do	29	do	78	259	22
J. H. R. Molson	do	7	do	do	do	do	29	do	78	62	85
H. J. Taylor	do	7	St. Catharines	do	do	do	29	do	78	39	35
John Fisher	do	27	Kingston	do	do	do	29	do	78	9	17
Philip Bajus	do	27	do	do	do	do	29	do	78	5	12
Simeon Jones	March	9	St. John	do	do	do	29	do	78	49	00
James Ready	do	9	do	do	do	do	29	do	78	6	00
J. Kormann	do	16	Toronto	do	do	do	34	do	177	148	20
Joseph Luke	do	23	Brantford	do	do	do	29	do	78	61	47

No. 16.—Refunds of Revenue—*Continued.*

EXCISE—*Continued.*

Article.	To whom Paid.	Date.	Division.	Under what Authority Refunded.	Amount.	Total.
		1891.			$ cts.	$ cts.
Malt—*Continued*...	Henry Huether	March 26	Guelph	Refunded under Revised Statutes, Cap. 29, Sec. 78	32 39	
	H. S. Fairall	April 1	Victoria	do do do 34 do 178	4 00	
	Hasenfratz & Lawson	do 1	do	do do do 34 do 178	40 50	
	C. W. Hayward	do 1	Halifax	do do do 34 do 178	30 35	
	J. C. Oland	do 1	do	do do do 34 do 178	552 26	
	W. N. Wickwire	do 1	do	do do do 34 do 178	292 82	
	D. Macpherson	do 2	Peterborough	do do do 29 do 78	3 18	
	W. H. Haslam	do 2	do	do do do 29 do 78	3 50	
	Albert Winslow	do 2	do	do do do 29 do 78	49 50	
	H. Calcutt	do 3	do	do do do 29 do 78	14 30	
	D. Morris	do 7	Terrebonne	do do do 29 do 78	2 39	
	John Labatt	do 7	London	do do do 29 do 78	48 62	
	J. Kormann	do 25	Toronto	do do do 34 do 177	63 68	
	A. Cranston	do 28	Guelph	do do do 29 do 78	34 05	
	Arthur Bixel	do 28	Brantford	do do do 29 do 78	14 97	
	Louis Bernhardt	do 28	Guelph	do do do 29 do 78	8 50	
	Joseph Luke	do 28	Brantford	do do do 29 do 78	6 13	
	J. F. Flindall	do 28	Belleville	do do do 29 do 78	1 12	
	Jas. A. Roy	do 28	do	do do do 29 do 78	15 12	
	E. L. Drewry	do 28	Winnipeg	do do do 29 do 78	51 73	
	Wm. Claugher	do 28	do	do do do 29 do 78	4 40	
	Patrick Shea	do 28	do	do do do 29 do 78	17 51	
	J. C. O'Mullin	do 28	Halifax	do do do 29 do 78	11 77	
	J. Lindberg	do 28	do	do do do 29 do 78	4 50	
	F. H. Walker	do 28	Windsor	do do do 29 do 78	113 05	
	Ls. Griesinger, jun	do 28	do	do do do 29 do 78	26 27	
	James Aldred	do 28	do	do do do 29 do 78	6 30	
	Jas. Anderton	do 28	Toronto	do do do 29 do 78	13 19	
	J. A. P. Clarke	do 28	do	do do do 29 do 78	7 51	
	Thos. Davies	do 28	do	do do do 29 do 78	96 62	
	Eugene O'Keefe	do 28	do	do do do 29 do 78	172 43	
	Wm. G. Gooderham	do 28	do	do do do 29 do 78	119 96	
	Edwin Brain	do 28	Toronto	do do do 29 do 78	12 00	

E. E. Williams	do	28	do	do	do	do	29	do	78	5	57
Robert Davies	do	28	do	do	do	do	29	do	78	168	96
L. J. Cosgrave	do	28	do	do	do	do	29	do	78	60	27
Hergott Bros.	do	28	Stratford	do	do	do	29	do	78	8	34
Estate Henry Wells	do	28	do	do	do	do	29	do	78	2	34
Cyril Gwyn	do	28	Guelph	do	do	do	29	do	78	3	16
L. H. Clarke	do	28	do	do	do	do	29	do	78	171	93
Cranmiller & White	do	28	St. Catharines	do	do	do	29	do	78	96	57
J. McCarthy	do	28	London	do	do	do	29	do	78	51	21
The Prescott B. & M. Co.	do	28	Prescott	do	do	do	29	do	78	33	03
J. P. Wiser	do	28	do	do	do	do	29	do	78	33	85
Henry Calcutt	do	28	Peterborough	do	do	do	29	do	78	8	53
R. Bowie	do	28	Prescott	do	do	do	29	do	78	18	34
D. McPherson	do	28	Peterborough	do	do	do	29	do	78	8	20
Albert Winslow	do	28	do	do	do	do	29	do	78	21	03
W. H. Haslam	do	28	do	do	do	do	29	do	78	2	55
Henry Rudolph	do	28	London	do	do	do	29	do	78	19	40
Cyrus Bixel	do	28	do	do	do	do	29	do	78	17	43
John Labatt	do	28	do	do	do	do	29	do	78	129	30
P. Bajus	do	28	Kingston	do	do	do	29	do	78	4	52
John Fisher	do	28	do	do	do	do	29	do	78	12	12
M. S. Wilson	do	28	Hamilton	do	do	do	29	do	78	75	57
J. J. Steel	do	28	do	do	do	do	29	do	78	33	61
J. H. E. Seagram	do	28	Guelph	do	do	do	29	do	78	21	00
F. H. Carling	do	28	London	do	do	do	29	do	78	133	75
P. Bernhardt	do	29	Guelph	do	do	do	29	do	78	8	12
Thos. Holliday	do	29	do	do	do	do	29	do	78	11	82
L. Kuntz	do	29	do	do	do	do	29	do	78	15	60
C. Huether	do	29	do	do	do	do	29	do	78	12	75
G. Sleeman	do	29	do	do	do	do	29	do	78	93	69
M. N. Todd	do	29	do	do	do	do	29	do	78	0	93
F. X. Messner	May	1	Stratford	do	do	do	29	do	78	6	83
David Schwan	do	1	do	do	do	do	29	do	78	6	60
H. J. Taylor	do	1	St. Catharines	do	do	do	29	do	78	51	21
H. Henser & Co	do	1	London	do	do	do	29	do	78	6	70
J. M. Lottridge	do	4	Hamilton	do	do	do	29	do	78	104	94
L. H. Clarke & Co.	do	4	Toronto	do	do	do	29	do	78	195	79
J. Rau	do	4	Guelph	do	do	do	29	do	78	8	25
A. J. Dawes	do	5	Montreal	do	do	do	29	do	78	239	11
Francis Barton	do	5	do	do	do	do	29	do	78	31	90
J. H. R. Molson	do	5	do	do	do	do	29	do	78	152	27
Wm. Dow & Co.	do	5	do	do	do	do	29	do	78	379	52
C. S. Bernhardt	do	5	do	do	do	do	29	do	78	10	61
The Toronto B. & M. Co.	do	27	Toronto	do	do	do	29	do	78	58	96
C. W. Hayward	do	27	Halifax	do	do	do	29	do	78	5	95
W. N. Wickwire	do	27	do	do	do	do	29	do	78	84	10
J. C. Oland	do	27	do	do	do	do	29	do	78	33	60
Simeon Jones	do	29	St. John	do	do	do	29	do	78	45	00
James Ready	do	29	do	do	do	do	29	do	78	18	00

No. 16.—REFUNDS of Revenue.—*Continued.*

EXCISE—*Continued.*

Articles.	To whom Paid.	Date.	Division.	Under what Authority Refunded.	Amount.	Total.
		1891.			$ cts.	$ cts.
Malt—*Concluded*...	F. H. Carling............	June 5..	London........	Refunded under Revised Statutes, Cap. 29, Sec. 78....	31 79	
	Peter Henser............	do 5..	do	do do do 34 do 177....	12 00	20,449·10
		1890.				
Tobacco..........	A. A. Boutell....	July 7..	Windsor.. ...	do do do 34 do 259....	14 23	
	J. E. Tuckett & Son......	do 7..	Hamilton	do do do 34 do 259....	46 04	
	B. Houde & Co.	do 8..	Quebec........	do do do 34 do 259....	83 12	
	J. Lemesurier.	do 8..	do	do do do 34 do 259.. .	26 38	
	D. Ritchie & Co	do 23..	Montreal.......	do do do 34 do 259 ...	46 14	
	do	do 30..	do	do do do 34 do 270....	5 25	
	G. T. Tuckett.	Aug. 6..	Hamilton.	do do do 34 do 259....	78 76	
	J. A. E. Chaperon.......	do 7..	Windsor.... ..	do do do 34 do 259....	10 99	
	J. Lemesurier.	do 7..	Quebec	do do do 34 do 259	28 74	
	B. Houde & Co..	do 7..	do	do do do 34 do 259.. .	99 47	
	D. Ritchie & Co	do 9..	Montreal.	do do do 34 do 259...	42 12	
	The American Cigarette Co.	do 18..	do	do do do 34 do 259	92 25	
	G. T. Tuckett	Sept. 5..	Hamilton.......	do do do 34 do 259 ..	41 89	
	J. A. E. Chaperon........	do 10..	Windsor..... ..	do do do 34 do 259...	4 73	
	J. Lemesurier.....	do 10..	Quebec....... .	do do do 34 do 259....	27 95	
	B. Houde & Co...........	do 10 .	do	do do do 34 do 259....	91 12	
	do	Oct. 6..	do	do do do 34 do 259....	91 48	
	J. Lemesurier............	do 6..	do	do do do 34 do 259...	29 60	
	G. T. Tuckett.....	do 7..	Hamilton	do do do 34 do 259...	65 20	
	The American Cigarette Co.	do 14..	Montreal.......	do do do 34 do 259....	49 38	
	D. Ritchie & Co	do 14..	do	do do do 34 do 259.. .	41 53	
	do	do 25..	do	do do do 34 do 259.. .	47 25	
	G. T. Tuckett....... ...	Nov. 7..	Hamilton	do do do 34 do 259. .	72 38	
	J. L. Samuel	do 8..	Montreal......	do do do 34 do 270 ...	45 00	
	B. Houde & Co..	do 8..	Quebec.........	do do do 34 do 259...	101 87	
	J. Lemesurier............	do 8..	do	do do do 34 do 259	31 28	
	G. T. Tuckett	Dec. 4..	Hamilton	do do do 34 do 259 ...	56 75	
	B. Houde & Co.....	do 5 .	Quebec.........	do do do 34 do 259....	84 24	
	J. Lemesurier.	do 5..	do	do do do 34 do 259...	28 98	

do	do	10	do	do	do	do	34	do	270	11	10
M. Masuret	do	10	London.	do	do	do	34	do	259	2	44
D. Ritchie & Co	do	13	Montreal.	do	do	do	34	do	259	67	67
The American Cigarette Co.	do	13	do	do	do	do	34	do	259	73	88
D. Ritchie & Co	do	17	do	do	do	do	34	do	259	52	29
The Empire Tobacco Co.	do	31	do	do	do	do	34	do	270	8	10
	1891.										
B. Houde & Co	Jan.	16	Quebec	do	do	do	34	do	259	57	52
J. Lemesurier	Jan.	16	Quebec.	do	do	do	34	do	259	19	15
Geo. T. Tuckett	do	16	Hamilton	do	do	do	34	do	259	47	67
B. Houde & Co.	do	16	Quebec.	do	do	do	34	do	270	50	63
J. Lemesurier.	do	16	do	do	do	do	34	do	270	35	02
D. Ritchie & Co	do	24	Montreal.	do	do	do	34	do	259	17	88
The Empire Tobacco Co.	do	24	do	do	do	do	34	do	259	19	05
The American Cigarette Co.	do	24	do	do	do	do	34	do	259	23	78
P. Beneteau	Feb.	5	Windsor	do	do	do	29	do	78	37	50
A. D. Percheron	do	5	Montreal	do	do	do	29	do	78	25	00
M. Masuret.	do	5	London	do	do	do	34	do	259	19	21
B. Houde & Co.	do	5	Quebec	do	do	do	34	do	259	63	02
J. Lemesurier	do	5	do	do	do	do	34	do	259	13	96
Geo. E. Tuckett & Son	do	5	Hamilton	do	do	do	34	do	259	64	74
M. Masuret.	do	17	London	do	do	do	34	do	259	25	68
The American Cigarette Co.	do	19	Montreal.	do	do	do	34	do	259	20	53
D. Ritchie & Co.	do	19	do	do	do	do	34	do	259	18	08
do	do	19	do	do	do	do	34	do	270	15	00
The Empire Tobacco Co.	do	19	do	do	do	do	34	do	270	678	38
do do	do	20	do	do	do	do	34	do	259	84	88
The McAlpin Tobacco Co.	do	24	Toronto	do	do	do	34	do	259	135	60
J. L. Samuel.	do	25	Montreal.	do	do	do	34	do	270	36	15
The Empire Tobacco Co.	do	27	do	do	do	do	34	do	270	64	05
B. Houde & Co	March	5	Quebec	do	do	do	34	do	259	68	84
J. Lemesurier.	do	5	do	do	do	do	34	do	259	17	03
M. Masuret	do	6	London.	do	do	do	34	do	259	12	95
Geo. E. Tuckett & Son.	do	9	Hamilton	do	do	do	34	do	259	66	52
D. Ritchie & Co	do	12	Montreal.	do	do	do	34	do	270	8	55
do	do	12	do	do	do	do	34	do	259	23	24
The American Cigarette Co.	do	23	do	do	do	do	34	do	259	29	90
J. Lemesurier	April	3	Quebec	do	do	do	34	do	259	19	04
B. Houde & Co.	do	3	do	do	do	do	34	do	259	78	73
Geo. T. Tuckett	do	7	Hamilton	do	do	do	34	do	259	13	75
M. Masuret.	do	9	London	do	do	do	34	do	259	13	14
E. A. McAlpin.	do	10	Toronto	do	do	do	34	do	259	50	46
The Empire Tobacco Co.	do	13	Montreal.	do	do	do	34	do	259	76	91
B. Goldstein	do	16	do	do	do	do	34	do	259	33	43
do	do	16	do	do	do	do	34	do	270	5	10
D. Ritchie & Co	do	21	do	do	do	do	34	do	259	42	77
M. Masuret.	May	6	London	do	do	do	34	do	259	19	68

No. 16.—Refunds of Revenue—*Continued.*

EXCISE—*Continued.*

Article.	To whom Paid.	Date.	Division.	Under what Authority Refunded.	Amount.	Total.
		1891.			$ cts.	$ cts.
Tobacco—*Continued.*	Geo. T. Tuckett	May 6	Hamilton	Refunded under Revised Statutes, Cap. 34 Sec. 259	66 56	
	B. Houde & Co.	do 9	Quebec	do do do 34 do 270	7 50	
	do	do 9	do	do do do 34 do 259	88 70	
	J. Lemesurier	do 9	do	do do do 34 do 259	22 53	
	B. Goldstein	do 18	Montreal	do do do 34 do 259	30 94	
	D. Ritchie & Co	do 27	do	do do do 34 do 259	65 68	
	James Henry	do 29	do	do do do 34 do 270	10 50	
	B. Houde & Co.	June 5	Quebec	do do do 34 do 259	96 18	
	J. Lemesurier	do 5	do	do do do 34 do 259	28 31	
	M. Masuret	do 8	London	do do do 34 do 259	3 25	
	Geo. T. Tuckett	do 11	Hamilton	do do do 34 do 259	40 20	
	D. Ritchie & Co	do 12	Montreal	do do do 34 do 259	62 79	
	B. Goldstein	do 12	do	do do do 34 do 259	43 74	
						4,418 00
		1890.				
Cigars	H. Jacobs	July 18	Montreal	do do do 29 do 78	600 00	
	Estate ,Jacob Kirchemer	Nov. 17	Brantford	do do do 29 do 78	62 50	
	Joseph Renaud	Dec. 6	Joliette	do do do 29 do 78	56 25	
		1891.				
	E. A. Ashbury	Feb. 5	Windsor	do do do 29 do 78	37 50	
	Marcelin Hay	April 7	Montreal	do do do 29 do 78	15 00	
	John Tacey	do 7	Toronto	do do do 29 do 78	20 83	
	Max Klee	do 7	do	do do do 29 do 78	31 25	
	M. E. Spilling	June 12	do	do do do 34 do 270	3 15	
						826 48
		1890.				
Officer's Salaries	A. H. Badgeron	Sept. 2	Toronto	do do do 29 do 78	300 00	300 00

Bonded Manufactories	E. B. Anderson	1890. July 11	London	do	do	do 29 do 78	10 00	
	W. J. Thomas	1891. April 7	Toronto	do	do	do 29 do 78	10 00	20 00
Seizures	Alfred Picard	1890. July 10	Three Rivers	do	do	do 29 do 78	25 00	25 00
					Grand Total			36,624 49

E. MIALL,
Commissioner.

Inland Revenue Department,
Ottawa, 17th August, 1891.

No. 17.—DEPARTMENTAL EXPENDITURE, 1890-91.

(*For Details, see Appendix B.*)

Dr. Cr.

Due by sundry persons, 1st July, 1890.	Disbursed by the Receiver General.	Deduction for Superanuna-tion.	Total.	—	Salaries.	Contingen-cies.	Due by sundry persons, 30th June, 1891.	Total.
$ cts.	$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.
	7,000 00		7,000 00	Minister of Inland Revenue	7,000 00			7,000 00
	36,371 70	723 26	37,094 96	Departmental Officers	37,094 96			37,094 96
	495 18		495 18	Subscription to newspapers		495 18		495 18
	815 20		815 20	Extra Clerks		815 20		815 20
	1,066 39		1,066 39	Telegraph Companies		1,066 39		1,066 39
	889 35		889 35	Stationery		889 35		889 35
	165 48		165 48	Books		165 48		165 48
	450 09		450 09	Printing		450 09		450 09
	199 63		199 63	Postage		199 63		199 63
216 66	1,660 09		1,876 75	Sundry persons		1,860 09	16 66	1,876 75
216 66	49,113 11	723 26	50,053 03	Totals	44,094 96	5,941 41	16 66	50,053 03

E. MIALL,
Commissioner.

Inland Revenue Department,
Ottawa, 17th August, 1891.

WEIGHTS AND MEASURES, GAS AND LAW STAMPS.

DR. No. 18.—STATEMENT showing amount of Revenue accrued during Year ended 30th June, 1891. CR.

—	Weights and Measures Stamps.	Gas Stamps.	Law Stamps.		Total.	—	Weights and Measures Stamps.	Gas Stamps.	Law Stamps.		Total.
			Supreme Court.	Exchequer Court.					Supreme Court.	Exchequer Court.	
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
To amount of Stamps destroyed or returned by Distributors..........	21 12				21 12	By amount of Stamps in the hands of Distributors on 1st July, 1890......	38,826 30	17,731 65			56,557 95
To Commission allowed.			91 70	47 55	139 25						
To amount of Stamps remaining in hands of Distributors, 30th June, 1891..........	42,199 98	20,508 40			62,708 38	By Stamps issued by the Inland Revenue Department during the year..	37,740 50	10,780 00	1,834 00	951 00	51,305 50
To Balance, being the Revenue accrued during 1890-91.	34,345 70	8,003 25	1,742 30	903 45	44,994 70						
Totals	76,566 80	28,511 65	1,834 00	951 00	107,863 45	Totals	76,566 80	28,511 65	1,834 00	951 00	107,863 45

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

WEIGHTS AND MEASURES, 1890-91.

Dr. No. 19 (A).—Inspectors in Account with Revenue. Cr.

Balances due by Inspectors, 1st July, 1890.		Stamps issued to Inspectors.	Seizures and Penalties.	Total.	Divisions.	Stamps returned or destroyed.	Deposited to credit of Receiver-General.	Balances due by Inspectors, 30th June, 1891.		Total.
Stamps on hand.	Cash on hand.							Stamps on hand.	Cash on hand.	
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
948 66	66 74	2,065 00	10 00	3,090 40	Belleville	6 10	1,300 02	1,691 18	93 10	3,090 40
3,183 35	1,599 97	8,101 00	5 00	12,889 32	Hamilton	15 00	7,359 60	3,803 77	1,710 95	12,889 32
1,648 98	127 89	1,177 00		2,953 87	Kingston		1,567 99	1,284 03	101 85	2,953 87
1,397 61	286 90	1,260 00	10 00	2,954 51	London		2,050 28	779 26	124 97	2,954 51
1,639 92		1,090 00		2,729 92	Orillia		1,185 31	1,544 61		2,729 92
404 64		2,402 00		2,806 64	Ottawa		1,316 30	1,490 34		2,806 64
2,351 23		2,870 00	40 00	5,261 23	Toronto		3,044 55	1,886 13	330 55	5,261 23
2,895 15		2,455 00	10 00	5,360 15	Windsor		2,258 63	3,101 52		5,360 15
14,469 54	2,081 50	21,420 00	75 00	38,046 04	*Ontario*	21 10	20,082 68	15,580 84	2,361 42	38,046 04
9,456 65	542 98	6,740 00	1 18	16,740 81	Montreal	0 02	6,790 52	8,986 09	964 18	16,740 81
3,007 21	87 52	2,320 00		5,414 73	Quebec		1,359 64	3,844 05	211 04	5,414 73
2,691 02		800 00		3,491 02	Three Rivers		1,238 23	2,252 79		3,491 02
15,154 88	630 50	9,860 00	1 18	25,646 56	*Quebec*	0 02	9,388 39	15,082 93	1,175 22	25,646 56
906 00		930 00		1,836 00	Fredericton		209 51	1,626 49		1,836 00
761 60		890 00		1,651 60	King's		564 89	1,086 71		1,651 60
432 36		610 00		1,042 36	St. John		653 40	388 96		1,042 36
2,099 96		2,430 00		4,529 96	*New Brunswick*		1,427 80	3,102 16		4,529 96
705 51		1,040 00		1,745 51	Cape Breton		230 26	1,515 25		1,745 51
553 15	42 81	630 00		1,225 96	Halifax		552 78	579 51	93 67	1,225 96

715 25		455 00		1,170 25	Pictou		295 08	875 17		1,170 25
235 23		30 00		265 23	Yarmouth		44 50	220 73		265 23
2,209 14	42 81	2,155 00		4,406 95	*Nova Scotia*		1,122 62	3,190 66	93 67	4,406 95
358 72		377 50		736 22	*Charlottetown, P.E.I.*		366 91	369 31		736 22
3,368 89	185 30	1,298 00		4,852 19	*Winnipeg, Man*		934 90	3,889 34	27 95	4,852 19
1,165 17	4 00	200 00		1,369 17	*Victoria, B.C.*		338 93	984 74	45 50	1,369 17
38,826 30	2,944 11	37,740 50	76 18	79,587 09	Grand Totals	21 12	33,662 23	42,199 98	3,703 76	79,587 09

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

WEIGHTS AND MEASURES, 1890–91.

No. 19 (B.)—Deputy Inspectors of the Old Divisions in account with Revenue.

Dr. Cr.

Balances due 1st July, 1890. — Cash on hand.	Total.	Divisions.	Balances due 30th June, 1891. — Cash on hand.	Total.
$ cts.	$ cts.		$ cts.	$ cts.
87 10	87 10	Essex	87 10	87 10
87 10	87 10	*Ontario*	87 10	87 10
5 62	5 62	Hull	5 62	5 62
5 62	5 62	*Quebec*	5 62	5 62
92 72	92 72	Totals	92 72	92 72

E. MIALL,
Commissioner.

Inland Revenue Department,
Ottawa, 17th August, 1891.

GAS INSPECTION AND LAW STAMPS, 1890-91.

Dr. No. 20.—Stamp Distributors in Account with Inland Revenue Department. Cr.

Balances, 1st July, 1890.		Stamps issued to Inspectors and others.	Penalties.	Total.	Districts.	Commission allowed to Distributors of Law Stamps.	Deposited to credit of Receiver General.	Balances, 30th June, 1891.		Total.
Stamps on hand.	Cash on hand.							Stamps on hand.	Cash on hand.	
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
....	....	662 50	....	662 50	Barrie	....	112 00	550 50	....	662 50
453 25	....	62 50	10 00	525 75	Belleville	....	71 00	449 75	5 00	525 75
....	....	662 50	....	662 50	Berlin	....	47 75	614 75	....	662 50
614 50	38 50	50 00	....	703 00	Brockville	....	119 75	583 25	....	703 00
714 50	....	....	....	714 50	Cobourg	....	113 00	601 50	....	714 50
....	....	150 00	....	150 00	Cornwall	....	24 00	126 00	....	150 00
....	....	675 00	....	675 00	Guelph	....	30 00	645 00	....	675 00
2,163 75	....	275 00	....	2,438 75	Hamilton	....	506 00	1,860 25	72 50	2,438 75
1,190 75	....	50 00	....	1,240 75	Kingston	....	73 25	1,150 25	17 25	1,240 75
242 75	6 00	....	....	248 75	Listowel	....	39 75	202 50	6 50	248 75
211 25	87 75	600 00	30 00	929 00	London	....	665 75	184 00	79 25	929 00
....	....	677 50	....	677 50	Napanee	....	49 00	614 50	14 00	677 50
518 00	....	....	....	518 00	Ottawa	....	227 00	291 00	....	518 00
505 75	....	....	....	505 75	Owen Sound	....	43 75	448 50	13 50	505 75
248 50	12 00	....	....	260 50	Peterborough	....	48 00	195 75	16 75	260 50
....	....	650 00	....	650 00	Sarnia	....	100 75	549 25	....	650 00
....	....	300 00	10 00	310 00	Stratford	....	80 00	219 50	10 50	310 00
885 40	236 15	2,997 50	....	4,119 05	Toronto	....	2,303 40	1,610 65	205 00	4,119 05
7,748 40	380 40	7,812 50	50 00	15,991 30	*Ontario*	....	4,654 15	10,896 90	440 25	15,991 30
1,078 50	....	1,692 50	....	2,771 00	Montreal	....	2,104 75	666 25	....	2,771 00
840 00	4 00	775 00	....	1,619 00	Quebec	....	285 00	1,334 00	....	1,619 00
534 75	....	....	....	534 75	Sherbrooke	....	31 00	503 75	....	534 75
216 50	....	....	....	216 50	Three Rivers	....	....	216 50	....	216 50
2,669 75	4 00	2,467 50	....	5,141 25	*Quebec*	....	2,420 75	2,720 50	....	5,141 25

GAS INSPECTION AND LAW STAMPS, 1890-91—*Concluded.*

No. 20.—Stamp Distributors in Account with Inland Revenue Department.

Dr. Cr.

Balances, 1st July, 1890.		Stamps issued to Inspectors and others.	Penalties.	Total.	Districts.	Commission allowed to Distributors of Law Stamps.	Deposited to credit of Receiver General.	Balances, 30th June, 1891.		Total.
Stamps, on hand.	Cash on hand.							Stamps on hand.	Cash on hand.	
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
992 50	....	....	....	992 50	....Fredericton	....	49 25	943 25	....	992 50
1.503 25	....	....	....	1,503 25	...Moncton........	....	18 00	1,485 25	....	1,503 25
1,115 00	....	50 00	....	1,165 00	... St. John........	....	201 75	921 75	41 50	1,165 00
3,610 75	....	50 00	....	3,660 75	......*New Brunswick*........	....	269 00	3,350 25	41 50	3,660 75
1,395 75	89 50	400 00	....	1,885 25	...Halifax........	....	417 25	1,379 00	89 00	1,885 25
110 25	....	....	....	110 25	....Pictou........	....	....	110 25	....	110 25
1,506 00	89 50	400 00	....	1,995 50	.....*Nova Scotia*........	....	417 25	1,489 25	89 00	1,995 50
676 00	....	....	....	676 00	....*Charlottetown, P.E.I.*........	....	51 50	624 50	....	676 00
902 25	18 25	....	....	920 50	..... *Winnipeg, Man.*........	....	55 25	838 50	26 75	920 50
618 50	12 00	50 00	....	680 50	......*Victoria, B.C.*........	....	80 00	588 50	12 00	680 50
17,731 65	504 15	10,780 00	50 00	29,065 80	...Grand Totals, Gas Inspection...	....	7,947 90	20,508 40	609 50	29,065 80
....	....	2,785 00	....	2,785 00	...Law Stamps........	139 25	2,645 75	....	....	2,785 00

Inland Revenue Department,
Ottawa, 17th August, 1891.

E. MIALL,
Commissioner.

WEIGHTS AND MEASURES, 1890–91.

No. 21 (A).—INSPECTION DIVISIONS in Account with Expenditure.

(*For Details, see Appendix B.*)

DR. CR.

Amounts received from Department to meet Expenditure.	Deductions from Salaries for Superannuation.	Total.	Divisions.	Expenditure Authorized by the Department.						Total.
				Salaries.	Seizure Expenses.	Special Assistance.	Rent.	Travelling Expenses.	Sundries.	
$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
2,898 69	45 92	2,944 61	Belleville	2,300 00			100 00	336 08	208 53	2,944 61
6,271 97	94 04	6,366 01	Hamilton	4,989 19		366 88		835 39	174 55	6,366 01
3,311 88	48 00	3,359 88	Kingston	2,400 00			90 00	489 33	380 55	3,359 88
3,166 18	49 96	3,216 14	London	2,500 00				575 74	140 40	3,216 14
2,186 05	36 00	2,222 05	Orillia	1,800 00				384 57	37 48	2,222 05
3,803 36	56 28	3,859 64	Ottawa	3,000 00			200 00	499 72	159 92	3,859 64
4,301 61	66 92	4,368 53	Toronto	3,350 00	1 75	214 00		676 27	126 51	4,368 53
2,859 76	36 00	2,895 76	Windsor	1,800 00	6 05			1,042 57	47 14	2,895 76
24 40		24 40	District Inspectors					24 40		24 40
28,823 90	433 12	29,257 02	*Ontario*	22,139 19	7 80	580 88	390 00	4,864 07	1,275 08	29,257 02
7,586 91	129 09	7,716 00	Montreal	6,638 81				833 55	243 64	7,716 00
4,331 65	60 68	4,392 33	Quebec	3,655 36				669 39	67 58	4,392 33
2,445 31	40 86	2,486 17	Three Rivers	2,200 00				256 40	29 77	2,486 17
14,363 87	230 63	14,594 50	*Quebec*	12,494 17				1,759 34	340 99	14,594 50
1,737 90	31 96	1,769 86	Fredericton	1,600 00				157 31	12 55	1,769 86
1,667 43	28 04	1,695 47	King's	1,400 00				279 01	16 46	1,695 47
1,831 97	36 00	1,867 97	St. John	1,800 00				60 52	7 45	1,867 97
5,237 30	96 00	5,333 30	*New Brunswick*	4,800 00				496 84	36 46	5,333 30

WEIGHTS AND MEASURES, 1890-91—*Continued.*

No. 21 (A).—Inspection Divisions in Account with Expenditure.

(*For Details, see Appendix B.*)

Dr. Cr.

Amounts received from Department to meet Expenditure.	Deductions from Salaries for Superannuation.	Total.	Divisions.	Expenditure Authorized by the Department.						Total.
				Salaries.	Seizure Expenses.	Special Assistance.	Rent.	Travelling Expenses.	Sundries.	
$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
1,027 36	16 00	1,043 36	Cape Breton	800 00			70 00	93 09	80 27	1,043 36
2,017 46	30 00	2,047 46	Halifax	1,500 00			300 00	46 61	200 85	2,047 46
1,734 12	24 32	1,758 44	Pictou	1,400 00				320 18	38 26	1,758 44
1,034 80	20 00	1,054 80	Yarmouth	1,000 00				41 10	13 70	1,054 80
5,813 74	90 32	5,904 06	*Nova Scotia*	4,700 00			370 00	500 98	333 08	5,904 06
1,561 18	24 00	1,585 18	*Charlottetown, P.E.I*	1,200 00	1 31	69 96		183 24	130 67	1,585 18
5,598 05	89 23	5,687 28	*Winnipeg, Man.*	4,703 20			108 00	806 33	69 75	5,687 28
2,149 31	30 59	2,179 90	*Victoria, B.C.*	1,531 10			210 00	333 20	105 60	2,179 90
6,218 22	40 00	6,258 22	General Contingencies	2,000 00				476 15	3,782 07	6,258 22
576 37		576 37	Queen's Printer						576 37	576 37
914 39		914 39	Stationery Office						914 39	914 39
15 00		15 00	Lithographing, &c						15 00	15 00
71,271 33	1,033 89	72,305 22	Grand Totals	53,567 66	9 11	650 84	1,078 00	9,420 15	7,579 46	72,305 22

Inland Revenue Department,
Ottawa, 17th August, 1891.

E. MIALL,
Commissioner.

WEIGHTS AND MEASURES, 1890-91.

No. 21 (B.)—INSPECTION Divisions in account with Expenditure.

DR. (Old Divisions.) CR.

Balances due by sundry persons, 1st July, 1890.	Total.	DIVISIONS.	Balances due by sundry persons, 30th June, 1891.	Total.
$ cts.	$ cts.		$ cts.	$ cts.
39 56	39 56	....Essex	39 56	39 56
33 53	33 53	....Waterloo	33 53	33 53
73 09	73 09	*Ontario*	73 09	73 09
0 33	0 33	....Drummond	0 33	0 33
41 45	41 45	....Laval	41 45	41 45
26 88	26 88	....Montmorency	26 88	26 88
27 51	27 51	....Richelieu	27 51	27 51
96 17	96 17	*Quebec*	96 17	96 17
24 00	24 00	....Lunenburg, Nova Scotia	24 00	24 00
193 26	193 26	Totals	193 26	193 26

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

GAS INSPECTION, 1890-91.

No. 22.—Inspection Districts in Account with Expenditure.

(*For Details, see Appendix B.*)

Dr. Cr.

Balances due by Sundry Persons, 1st July, 1890.	Amounts received from Department to meet Expenditure.	Deduction from Salaries for Superannuation.	Total.	Districts.	Expenditure Authorized by the Department.				Amounts due by Sundry Persons, 30th June, 1891.	Total.
					Salaries.	Rent.	Travelling Expenses.	Sundries.		
$ cts.	$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
	268 49	1 88	270 37	Barrie	97 81		49 65	122 91		270 37
	334 10	5 00	339 10	Belleville	250 00	50 00		39 10		339 10
	325 70	1 54	327 24	Berlin	80 18		28 70	218 36		327 24
	105 00	2 00	107 00	Brockville	100 00			7 00		107 00
	609 23	2 00	611 23	Cobourg	100 00	60 00	43 80	407 43		611 23
	150 75	2 00	152 75	Cornwall	100 00			52 75		152 75
	84 94	1 54	86 48	Guelph	80 18			6 30		86 48
	1,683 34	21 92	1,705 26	Hamilton	1,300 00	36 00	172 30	196 96		1,705 26
	583 40	8 00	591 40	Kingston	400 00	45 00	49 90	96 50		591 40
	161 60	1 25	162 85	Listowel	100 00	60 00		2 85		162 85
	1,419 05	20 00	1,439 05	London	1,000 00	110 00	233 45	95 60		1,439 05
	271 76	2 00	273 76	Napanee	100 00			173 76		273 76
	907 50	12 00	919 50	Ottawa	600 00	200 00		119 50		919 50
	305 13	4 00	309 13	Owen Sound	200 00	62 50		46 63		309 13
	288 95	4 00	292 95	Peterborough	200 00	50 00	23 30	19 65		292 95
	193 55		193 55	Sarnia		10 00	61 45	122 10		193 55
	127 60	1 88	129 48	Stratford	97 81		21 95	9 72		129 48
	1,257 91	24 00	1,281 91	Toronto	1,200 00		23 50	58 41		1,281 91
	9,078 00	115 01	9,193 01	*Ontario*	6,005 98	683 50	708 00	1,795 53		9,193 01
	2,172 70	40 04	2,212 74	Montreal	2,000 00	120 00	15 00	77 74		2,212 74
	1,341 59	21 68	1,363 27	Quebec	1,205 36			157 91		1,363 27
	105 35	2 00	107 35	Sherbrooke	100 00			7 35		107 35
	32 66	0 66	33 32	Sorel	33 32					33 32
	197 50	2 50	200 00	Three Rivers	200 00					200 00
	3,849 80	66 88	3,916 68	*Quebec*	3,538 68	120 00	15 00	243 00		3,916 68

....	197 50	2 50	200 00	Fredericton	200 00	....	....	....	....	200 00
100 00	437 94	6 00	543 94	Moncton	300 00	....	147 11	96 83	....	543 94
....	1,146 65	20 00	1,166 65	St. John	1,000 00	....	91 65	75 00	....	1,166 65
100 00	1,782 09	28 50	1,910 59	*New Brunswick*	1,500 00	....	238 76	171 83	....	1,910 59
....	2,137 36	25 96	2,163 32	Halifax	1,300 00	300 00	439 40	123 92	....	2,163 32
12 88	....	....	12 88	Pictou	....	....	....	....	12 88	12 88
12 88	2,137 36	25 96	2,176 20	*Nova Scotia*	1,300 00	300 00	439 40	123 92	12 88	2,176 20
....	224 00	2 50	226 50	*Charlottetown, P.E.I.*	200 00	....	....	26 50	....	226 50
....	326 40	4 00	330 40	*Winnipeg, Man*	200 00	108 00	....	22 40	....	330 40
....	407 38	4 00	411 38	*Victoria, B.C.*	200 00	210 00	....	1 38	....	411 38
300 00	1,260 94	....	1,560 94	General Expenses	....	....	113 01	1,247 93	200 00	1,560 94
....	267 01	....	267 01	Queen's Printer	....	....	....	267 01	....	267 01
....	153 88	....	153 88	Stationery	....	....	....	153 88	....	153 88
412 88	19,486 86	246 85	20,146 59		12,944 66	1,421 50	1,514 17	4,053 38	212 88	20,146 59

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

E. MIALL,
Commissioner

DR. No. 23.—STATEMENT showing the Transactions in connection with the Manufacture of Methylated Spirits. CR.

——	Amount.	Total.	——	Amount.	Total.
	$ cts.	$ cts.		$ cts.	$ cts.
To Stock on hand, 1st July, 1890		23,817 10	By Goods sold during the year		102,742 74
Alcohol	617 63		Methylated Spirits	98,604 24	
Wood Naphtha	20,562 65		Drums and Barrels	4,138 50	
Methylated Spirits	2,149 32				
Drums and Barrels	487 50		Stock on hand, 30th June, 1891		6,033 25
Articles purchased during the year		63,092 32	Wood Naphtha	2,272 38	
Alcohol	59,254 25		Methylated Spirits	3,073 37	
Drums and Barrels	3,838 07		Drums and Barrels	687 50	
Other expenses as follows		5,171 14			
Freight and Storage	2,275 09				
Rent of Warehouse	600 00				
Heating do	400 00				
Lighting do	46 80				
Salaries	1,448 00				
Sundries	401 25				
Balance, being net Profit over Expenditure		*16,695 43			
Total		108,775 99	Total		108,775 99

* This amount should be reduced by $903.75, amount of Superintendent of Warehouse's salary, which is already charged in Excise Statements.

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

No. 24.—STATEMENT showing the amount Voted and the Expenditure Authorized for each Service, 1890–91.

Service.	Grant.	Expenditure.	Over Expended.	Under Expended.
	$ cts.	$ cts.	$ cts.	$ cts.
Minister's Salary	7,000 00	7,000 00		
Departmental Salaries	37,882 50	37,094 96		787 54
do Contingencies	6,000 00	5,741 41		258 59
Excise Salaries	285,921 25	284,102 81		1,818 44
do Contingencies	73,675 00	73,062 03		612 97
Commission to Customs Officers	4,076 78	4,076 78		
Duty Pay	5,000 00	4,886 25		113 75
Cullers' Salaries	8,250 00	8,250 00		
do Contingencies	5,000 00	4,678 28		321 72
do Fees	8,300 00	8,004 79		295 21
do Annuities	8,600 00	7,666 68		933 32
Preventive Service	15,800 00	11,990 57		3,809 43
Hydraulic Rents	3,009 28	3,009 28		
Minor Revenues	800 00	67 81		732 19
Tobacco Stamps' Commission	250 00	118 37		131 63
Weights and Measures Salaries	53,700 00	53,567 66		132 34
do do Contingencies	19,000 00	18,737 56		262 44
Gas Inspection Salaries	12,900 00	12,944 66	44 66	
do Contingencies	9,000 00	6,789 05		2,210 95
Inspection of Staples	3,000 00	1,930 41		1,069 59
Adulteration of Food	25,025 00	24,725 12		299 88
Methylated Spirits	5,000 00			5,000 00
Liquor License Act	500 00	488 05		11 95
Total	597,689 81	578,932 53	44 66	18,801 94

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

APPENDIX A.

STATISTICS.

APPENDIX A—SPIRITS.

No. 1.—Return of Manufactures

Revenue Division.	Grain, etc., used for Distillation.							Total Grain used for Distillation.
	Malt.	Indian Corn.	Rye.	Wheat.	Oats.	Barley.	Molasses.	
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Belleville, Ont	156,800	2,979,758	899,968	....	40,274	....	....	4,076,800
Guelph "	186,225	3,598,200	924,600	3,900	100,275	....	....	4,813,200
Hamilton "	189,871	3,758,560	733,689	....	58,730	....	....	4,740,850
Perth "	331,949	....	....	....	....	....	....	331,949
Prescott "	308,694	6,115,005	1,144,971	....	76,635	....	....	7,645,305
Toronto "	944,075	21,341,350	4,174,937	....	302,450	72,430	....	26,835,242
Windsor "	985,660	16,632,000	3,886,490	....	257,850	....	....	21,762,000
Joliette, Que..	5,003	11,150	8,290	6,906	*13,065	13,954	235,582	58,368
Montreal "	....	....	....	....	....	....	....	....
Halifax, N.S........	565,900	2,385,748	297,452	....	18,600	75,500	....	3,343,200
Totals..........	3,674,177	56,821,771	12,070,397	10,806	854,814 *13,065	161,884	235,582	73,606,914

* Buckwheat.

Inland Revenue Department,
Ottawa, 17th August, 1891.

for the Year ended 30th June, 1891.

LICENSES.		Proof Spirits Manufactured at $1.30, $1.32, $1.50 and $1.52 per gallon.		Assessments to bring production up to Standard.		Total.		Total Duty Collected on Assessments, Deficiencies and on License Fees.
No.	Fees.							
	$	Gallons.	$ cts.	Gallons.	$ cts.	Gallons.	$ cts.	$ cts.
1	250	240,434·58	313,734 02	....	....	240,434·58	313,734 02	1,576 48
1	250	254,326·74	330,624 79	....	....	254,326·74	330,624 79	5,688 60
1	250	270,841·64	353,255 75	....	....	270,841·64	353,255 75	8,741 70
2	500	17,419·80	23,071 30	26·54	37 13	17,446·34	23,108 43	784 95
1	250	462,609·08	602,173 41	....	....	462,609·08	602,173 41	7,139 65
2	500	1,642,573·14	2,135,345 08	....	....	1,642,573·14	2,135,345 08	500 00
1	250	1,324,815·66	1,724,960 50	....	....	1,324,815·66	1,724,960 50	4,260 27
1	125	7,933·15	10,512 86	....	....	7,933·15	10,512 86	125 00
1	125	....	....	....	....	....	....	125 00
1	250	176,640·61	234,196 94	....	....	176,640·61	234,196 94	1,362 13
12	2,750	4,397,594·40	5,727,874 65	26·54	37 13	4,397,620·94	5,727,911 78	30,303 78

E. MIALL,
Commissioner.

APPENDIX A—*Continued*—SPIRITS.

No. 2.—COMPARATIVE STATEMENT of Spirits manufactured

PROVINCES.	GRAIN, &C., USED FOR DISTILLATION.							Total Grain used for Distillation.
	Malt.	Indian Corn.	Rye.	Wheat.	Oats.	Barley.	Molasses.	
1890.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Ontario........	3,795,087	64,644,721	13,164,711	26,600	992,564	109,760	....	82,733,443
Nova Scotia ...	495,125	2,145,700	239,475	... ..	32,400	35,900	....	2,948,600
Totals.. ...	4,290,212	66,790,421	13,404,186	26,600	1,024,964	145,660	....	85,682,043
1891.								
Ontario.... .	3,103,274	54,424,873	11,764,655	3,900	836,214	72,430	......	70,205,346
Quebec........	5,003	11,150	8,290	6,906	*13,065	13,954	235,582	58,368
Nova Scotia....	565,900	2,385,748	297,452	.. ..	18,600	75,500	....	3,343,200
Totals... ..	3,674,177	56,821,771	12,070,397	10,806	854,814 *13,065	161,884	235,582	73,606,914

*Buckwheat.

In 1890, in addition to the above. there was used for distillation in Ontario :—

Apple pomace	47,303	lbs.
Pear do	14,508	"
Grape do	38,958	"
Ground grapes	62,413	"
Glucose	2,330	"
Molasses	1,488	"
Lees	1,731	"
Total	168,731	"

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

during the Years ended 30th June, 1890 and 1891.

Licenses.		Proof Spirits Manufactured at $1.30, $1.32, $1.50, and $1.52 per gallon.		Assessments to bring production up to Standard.		Total.		Total Duty Collected on Assessments, Deficiencies, and on Licenses.
No.	Fees.							
	$	Gallons.	$ cts.	Gallons.	$ cts.	Gallons.	$ cts.	$ cts.
10	2,500	4,937,393·98	6,418,940 93	....	....	4,937,393·98	6,418,940 93	29,584 29
1	250	154,081·45	203,387 51	....	......	154,081·45	203,387 51	2,574 34
11	2,750	5,091.475·43	6,622,328 44	....	....	5,091,475·43	6,622,328 44	32,158 63
9	2,250	4,213,020·64	5,483,164 85	26·54	37·13	4,213,047·18	5,483,201 98	28,691 65
2	250	7,933·15	10,512 86	....	....	7,933·15	10,512 86	250 00
1	250	176,640·61	234,196 94	....	....	176,640·61	234,196 94	1,362 13
12	2,750	4,397,594·40	5,727,874 65	26·54	37 13	4,397,620·94	5,727,911 78	30,303 78

E. MIALL,
Commissioner

APPENDIX A—*Continued*—SPIRITS.

No. 3.—Statement showing the transactions in the Distilleries

Divisions.	Spirits in Process of Manufacture, 1st July, 1890.	Spirits Manufactured during Year.	Spirits returned to Distillery for Re-distillation.	Spirits Received at Distillery from other Sources.	
				Duty paid.	In Bond.
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.
Belleville, Ont.	....	240,434·58	1,640·51	....	....
Guelph "	2,219 59	254,326·74	275·54	1,122·37	....
Hamilton "	6,720·16	270,841·64	....	244·27	....
Perth "	515·78	17,419·80	....	....	....
Prescott "	8,510·00 *688·26	462,609·08	....	2,186·09	....
Toronto "	57,661·12	1,642,573·14	48,283·52	10,761·55	....
Windsor "	87,372·38	1,324,815·66	108,940·08	3,589·10	....
Joliette, Que	....	7,933·15	....	....	....
Halifax, N. S.	7,015·87	176,640·61	....	213·86	....
Totals	170,014·90 *688·26	4,397,594·40	159,139·65	18,117·24	....

* Excess quantity found in process.

Inland Revenue Department,
Ottawa, 17th August, 1891.

in the Dominion of Canada during the Year ended 30th June, 1891.

Total.	Spirits Warehoused during Year.	Fusel Oil.		Deficiencies in Spirits at Stock-taking, 30th June, 1891.	Spirits in Process of Manufacture, 30th June, 1891.	Total.
		Destroyed.	Removed.			
Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.
242,075·09	233,383·83	3,178·14	....	1,235·55	4,277·57	242,075·09
257,944·24	244,405·99	1,267·26	....	435·29	11,835·70	257,944·24
277,806·07	259,899·56	315·06	....	10,295·17	7,296·28	277,806·07
17,935·58	17,456·83	....	....	407·82	70·93	17,935·58
473,993·43	446,221·97	3,225·91	393·35	3,791·75	20,360·45	473,993·43
1,759,279·33	1,738,591·81	5,367·52	65·10	12,602·04	2,652·86	1,759,279·33
1,524,717·22	1,449,364·55	3,614·46	....	10,989·67	60,748·54	1,524,717·22
7,933·15	7,457·84	....	....	475·31	....	7,933·15
183,870·34	173,781·53	....	....	1,853·49	8,235·32	183,870·34
4,745,554·45	4,570,563·91	16,968·35	458·45	42,086·09	115,477·65	4,745,554·45

E. MIALL,
Commissioner.

APPENDIX A—*Continued*—SPIRITS.

DR. No. 4.—SPIRIT WAREHOUSE RETURN

Remaining in Warehouse from last Year.	Placed in Warehouse.	Imported.	Received from other Divisions.	Total.	REVENUE DIVISIONS.	Entered for Consumption at $1.30, $1.32, $1.50 and $1.52 per Gallon.		
Gallons.	Gallons.	Gallons.	Gallons.	Gallons.		Gallons.	$	cts.
308,654·04	233,383·83		52,227·11	594,264·98	Belleville	41,480·69	54,034	07
425·30			21,943·21	22,368·51	Brantford	17,458·86	22,734	06
29·82			7,014·72	7,044·54	Cornwall	6,625·90	8,613	75
602,176·41	244,405·99		36,000·92	882,583·32	Guelph	148,454·11	193,479	67
190,925·52	259,899·56		67,481·32	518,306·40	Hamilton	98,624·82	128,275	80
1,707·25			65,316·31	67,023·56	Kingston	47,336·63	61,646	78
2,255·48			63,178·64	65,434·12	London	57,063 78	74,296	13
2,213·92			129,858·65	132,072·57	Ottawa	129,051·66	167,962	96
1,544·07			93,356·79	94,900·86	do Govt. warehouse			
			58·27	58·27	do Dept. laboratory			
61·13			10,959·88	11,021·01	Owen Sound	10,618·38	13,804	05
44,454·73	17,456·83		33,259·32	95,170·88	Perth	38,970·68	51,040	10
			28,039·10	28,039·10	Peterborough	26,918·89	35,034	96
1,721·10			7,449·54	9,170·64	Port Arthur	7,331·76	9,544	23
1,066,983·37	446,221·97	51,532·40	54,076·33	1,618,814·07	Prescott	48,545·48	78,688	58
418·59			19,649·43	20,068·02	St. Catharines	16,802·11	21,907	57
33·00			21,342·95	21,375·95	Stratford	16,460·94	21,405	83
4,743,948·96	1,738,591·81		105,425·88	6,587,966·65	Toronto	389,070·55	506,352	17
3,838,081·57	1,449,364·55		89,717·70	5,377,163·82	Windsor	266,633·38	346,982	13
	7,457·84		10,306·04	17,763·88	Joliette	9,101·06	11,869	92
26,060·20			722,256·11	748,316·31	Montreal	620,689·22	807,831	14
4,508·34			209,931·96	214,440·30	Quebec	187,437·18	243,840	18
67·94			36,391·94	36,459·88	St. Hyacinthe	33,040·59	42,952	74
			21,291·44	21,291·44	St. John's	20,219·68	26,324	23
			57,079·73	57,079·73	Sherbrooke	54,733·83	71,232	88
96·10			13,640·71	13,736·81	Sorel	11,997·98	15,635	67
			12,746·49	12,746·49	Terrebonne	6,637·19	9,238	70
			26,134·94	26,134·94	Three Rivers	26.134·94	33,975	57
2,083·15		127·36	100,963·58	103,174·09	St. John, N.B.	88,387·43	115,512	68
238,767·72	173,941·89	16·71	42,595·09	455,321·41	Halifax, N.S.	88,036·80	115,776	46
827·16			2,807·31	3,634·47	Charlottetown, P.E.I.	3,441·33	4,528	46
5,278·21		63·37	111,591·37	116,932·95	Winnipeg, Man.	104,768·67	136,462	71
†1,598·99			29,020·51	30,619·50	Vancouver, B.C.	22,121·68	28,867	32
†5,644·56			50,633·71	56,278·27	Victoria, B.C.	43,467·83	56,786	27
8,612·54				8,612·54	Suspense			
11,099,179·17	*4,570,724·27	51,739·84	2,353,747·00	18,075,390·28	....Totals	2,687,664·23	3,516,637	77

†Spirits warehoused as above .... 4,570,724·27 galls.
do as per Statement No. 3. 4,570,563·91 do

160·36 do Difference, surplus on reducing at Halifax, N.S.

*Last year's statement shows 7,243·55 galls. remaining in warehouse at Victoria, B.C. At that time Victoria was the only division in that province, but since then the division of Vancouver has been created, and as part of the spirits belonged to Vancouver the change has been made here.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

for the Year ended 30th June, 1891. CR,

REMOVED IN BOND.		FREE.		Exported.	Used in Bonded Factories.	Remaining in Warehouse.	Total.
To other Divisions.	To Distillery for re-distillation.	Legal Allowance.	Other.				
Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.
72,805·56	1,640·51	5,142·79	3,317·63	487·33		469,390·47	594,264·98
					4,092·50	817·15	22,368·51
						418·64	7,044·54
78,563·82	275·54	7,670·95	796·46	31·65		646,790·79	882,583·32
52,062·53		270·21			31,611·15	335,737·69	518,306·40
1,998·67			1·68		11,251·41	6,435·17	67,023·56
				215·46		8,154·88	65,434·12
265·15			78·38			2,677·38	132,072·57
					94,900·86		94,900·86
			58·27				58·27
						402·63	11,021·01
108·26		589·70				55,502·24	95,170·88
						1,120·21	28,039·10
						1,838·88	9,170·64
343,201·21		3,822·85	2,876·11	589·54	51,532·40	1,168,246·48	1,618,814·07
1,295·19						1,970·72	20,068·02
1,461·68						3,453·33	21,375·95
1,013,308·05	48,283·52	27,383·11	8,317·81	2,105·44	‖2,049·77 56,484·73	5,040,963·67	6,587,966·65
720,197·38	108,940·08	43,739·27	3,571·52	14,070·01		4,220,012·18	5,377,163·82
849·26						7,813·56	17,763·88
17,388·83				505·54	47,906·55	61,826·17	748,316·31
393·06			138·47		15,171·36	11,300·23	214,440·30
316·28						3,103·01	36,459·88
						1,071·56	21,291·44
						2,345·90	57,079·73
						1,738·83	13,736·81
					4,068·08	2,041·22	12,746·49
							26,134·94
				23·51	‖323·24 5,843·28	8,596·63	103,174·09
46,517·51		5,508·99	36·42	1,527·23		313,694·46	455,321·41
						193·14	3,634·47
				87·54		12,076·74	116,932·95
466·17						8,031·65	30,619·50
2,548·39				854·22		9,407·83	56.278·27
						8,612·54	8,612·54
2,353,747·00	159.139·65	94,127·87	‡19,192·75	20,497·47	§94,900·86 227,961·46 ‖2,373·01	12,415,785·98	18,075,390·28

‡Of this quantity	14,910·06	galls.	is spirits allowed distillers, free of duty, as compensation for duty paid spirits taken into distilleries.
	3,317·63	do	destroyed by fire and written off by O.C.
	689·94	do	written off by Dept. authority.
	138·47	do	used by Govt. Cartridge Factory, Quebec.
	78·38	do	do His Excellency the Governor General.
	58·27	do	do in laboratory, Inland Revenue Department, Ottawa.
	19,192·75		

§Used in manufacture of methylated spirits at Government warehouse, Ottawa.

‖ do soap, &c.

E. MIALL,
Commissioner.

APPENDIX A—*Continued*—SPIRITS.

DR. No. 5.—COMPARATIVE STATEMENT of Warehouse

Remaining in Warehouse from last Year.	Placed in Warehouse	Imported	Received in Bond from other Divisions.	Total.	PROVINCES.	Entered for Consumption at $1.30, $1.32, $1.50 and $1.52 per Gallon.	
Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	1890.	Gallons.	$ cts.
9,600,590·30	4,986,856·36	31,014·57	934,951·30	15,553,412·53	Ontario	1,868,796·48	2,438,873 32
130,356·31	....	....	1,218,450·49	1,348,806·80	Quebec..........	1,254,360·67	1,630,685 94
19,622·26	....	....	105,443·15	125,065·41	New Brunswick..	117,615·55	152,989 43
167,593·31	149,831·61	....	42,778·52	360,203·44	Nova Scotia.....	102,597·45	134,482 60
465·80	....	....	2,896·80	3,362·60	P. E. Island.....	2,535·44	3,327 70
13,255·71	....	....	93,737·00	106,992·71	Manitoba	101,411·81	131,835 64
16,298·61	....	....	65,671·93	81,970·54	British Columbia.	73,876·36	96,039 95
9,948,182·30	5,136,687·97	31,014·57	2,463,929·19	17,579,814·03	.....Totals......	3,521,193·76	4,588,234 58
					1891.		
10,814,246·80	4,389,324·54	51,532·40	906,356·07	16,161,459·81	Ontario.........	1,367,448·62	1,795,802 84
30,732·58	7,457·84	....	1,109,779·36	1,147,969·78	Quebec..........	969,991·87	1,262,901 03
2,083·15	....	127·36	100,963·58	103,174·09	New Brunswick..	88,387·43	115,512 68
238,767·72	173,941·89	16·71	42,595·09	455,321·41	Nova Scotia....	88,036·80	115,776 46
827·16	....	....	2,807·31	3,634·47	P. E. Island.....	3,441·33	4,528 46
5,278·21	....	63·37	111,591·37	116,932·95	Manitoba	104,768·67	136,462 71
7,243·55	....	....	79,654·22	86,897·77	British Columbia.	65,589·51	85,653 59
11,099,179·17	4,570,724·27	51,739·84	2,353,747·00	18,075,390·28	....Totals......	2,687,664·23	3,516,637 77

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

Returns for the Years ended 30th June, 1890 and 1891. Cr.

Removed in Bond.		Free.		Exported.	Used in Bonded Factories.	Remaining in Warehouse.	Total.
To other Divisions.	To Distillery for Re-Distillation.	Legal Allowance.	Other.				
Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.
2,418,571·48	152,812·92	65,707·89	3,842·49	9,392·62	*81,847·80 138,194·05	10,814,246·80	15,553,412·53
33,880·87	....	....	330·17	81·44	29,421·07	30,732·58	1,348,806·80
164·12	....	....	....	....	5,202·59	2,083·15	125,065·41
11,312·72	1,512·00	3,497·51	1,140·23	1,375·81	....	238,767·72	360,203·44
....	....	....	....	....	....	827·16	3,362·60
....	....	....	....	302·69	....	5,278·21	106,992·71
....	....	....	....	850·63	....	7,243·55	81,970·54
2,463,929·19	154,324·92	69,205·40	5,312·89	12,003·19	*81,847·80 172,817·71	11,099,179·17	17,579,814·03
2,285,267·50	159,139·65	88,618·88	19,017·86	17,499·43	*94,900·86 157,021·96	11,972,545·05	16,161,459·81
18,947·43	....	....	138·47	505·54	67,145·99	91,240·48	1,147,969·78
....	....	....	....	23·51	6,166·52	8,596·63	103,174·09
46,517·51	....	5,508·99	36·42	1,527·23	....	313,694·46	455,321·41
....	....	....	....	....	....	193·14	3,634·47
....	....	....	....	87·54	....	12,076·74	116,932·95
3,014·56	....	....	....	854·22	....	17,439·48	86,897·77
2,353,747·00	159,139·65	94,127·87	19,192·75	20,497·47	*94,900·86 230,334·47	12,415,785·98	18,075,390·28

* Used in the manufacture of Methylated Spirits at Government Warehouse, Ottawa.

	1890.	1891.
Total Duty collected, Ex-Manufactory and Ex-Warehouse..	$4,617,643 21	$3,544,191 55
do on Licenses....................	2,750 00	2,750 00
	$4,620,393 21	$3,546,941 55

E. MIALL,
Commissioner.

APPENDIX A—*Continued*—MALT.

No. 6.—RETURN of Malt Manufactured for the Year ended 30th June, 1891.

REVENUE DIVISIONS.	No. of Maltsters.	License Fees.	Grain placed in Steep.	Malt Manufactured at 1 and 2 cts. per lb.	Paid Duty Ex-manufactory.	Warehoused.	Total Duty Collected Ex-manufactory, and on Licenses.
		$	Lbs.	Lbs.	Lbs.	Lbs.	$ cts.
Belleville, Ont.........	2	100	301,814	233,364	100,473	132,891	1,104 73
Brantford "	3	150	610,823	524,196	....	524,196	150 00
Guelph "	8	725	5,436,565	4,294,379	... .	4,294,379	725 00
Hamilton "	3	500	4,556,651	3,693,901	....	3,693,901	500 00
Kingston "	1	50	213,717	173,010	....	173,010	50 00
London "	4	500	5,652 244	4,539,927	2,488	4,537,439	524 88
Ottawa "	1	50	251,160	196,572	... ...	196,572	50 00
Owen Sound, Ont......	2	100	628,600	501,390	....	501,390	100 00
Perth "	2	100	343,951	270,755	31	270,724	100 31
Peterborough "	4	350	1,692,607	1,365,626	. ...	1,365,626	350 00
Prescott "	4	350	3,516,201	2,788,511	174,361	2,614,150	2,093 61
St. Catharines "	2	100	906,115	723,073	347,231	375,842	3,572 31
Stratford " ...,..	3	300	5,288,105	4,158,931	..... .	4,158,931	300 00
Toronto "	11	1,650	20,379,563	16,048,553	244,048	15,804,505	4,090 48
Windsor "	1	200	1,465,100	1,203,690	....	1,203,690	200 00
Totals............	51	5,225	51,243,216	40,715,878	868,632	39,847,246	13,911 32
Montreal, Que.........	5	700	10,847,566	8,673,666	1,676,703	6,996,963	17,467 03
Quebec "	1	150	1,499,458	1,179,374	... .	1,179,374	150 00
Totals............	6	850	12,347,024	9,853,040	1.676,703	8,176,337	17,617 03
Halifax, N.S...........	2	100	640,101	507,792	....	507,792	100 00
Charlottetown, P.E.I...	1	50	123,130	94,707	.. ..	94,707	50 00
Winnipeg, Man..	4	300	1,900,071	1,483,206	13,257	1,469,949	432 57
Vancouver, B.C........	1	50	22,000	16,456	16,456	....	214 56
Victoria "	1	50	59,190	47,877	47,877	... .	528 77
Totals	66	6,625	66,334,732	52,718,956	2,622,925	50,096,031	32,854 25

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

APPENDIX A—*Continued*—MALT.

No. 7.—Comparative Statement of Malt manufactured for the Years ended 30th June, 1890 and 1891.

Provinces.	No. of Maltsters.	License Fees	Grain placed in Steep.	Malt manufactured at 1 and 2 cts. per lb.	Paid Duty Ex-manufactory.	Warehoused	Total Duty collected Ex-manufactory, and on Licenses.
1890.		$	Lbs.	Lbs.	Lbs.	Lbs.	$ cts.
Ontario	52	5,250	63,944,104	51,615,794	1,315,286	50,300,508	18,402 86
Quebec	7	900	13,346,408	10,551,882	2,186,298	8,365,584	22,762 98
Nova Scotia	2	100	829,634	670,527	4,641	665,886	146 41
Prince Edward Island.	1	50	155,508	120,051	....	120,051	50 00
Manitoba	4	275	1,408,183	1,122,690	23,990	1,098,700	514 90
British Columbia	1	50	74,036	60,371	42,261	18,110	472 61
Totals	67	6,625	79,757,873	64,141,315	3,572,476	60,568,839	42,349 76
1891.							
Ontario	51	5,225	51,243,216	40,715,878	868,632	39,847,246	13,911 32
Quebec	6	850	12,347,024	9,853,040	1,676,703	8,176,337	17,617 03
Nova Scotia	2	100	640,101	507,792	....	507,792	100 00
Prince Edward Island.	1	50	123,130	94,707	....	94,707	50 00
Manitoba	4	300	1,900,071	1,483,206	13,257	1,469,949	432 57
British Columbia	2	100	81,190	64,333	64,333	....	743 33
Totals	66	6,625	66,334,732	52,718,956	2,622,925	50,096,031	32,854 25

E. MIALL,
Commissioner.

Inland Revenue Department,
Ottawa, 17th August, 1891.

APPENDIX A—*Continued*—MALT.

Dr. **No. 8.—Malt Warehouse Return**

Remaining in Warehouse from last year.	Placed in Warehouse.	Increases.	Received from other Divisions.	Imported.	Total.	Revenue Divisions.	
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.		
69,816	132,891	....	116,000	....	318,707	..Belleville.....	Ont.
336,379	524,196	9,375	....	....	869,950	..Brantford......	“
2,562,266	4,294,379	63,795	242,550	....	7,162,990	..Guelph.......	“
1,475,984	3,693,901	15,447	97,800	12,950	5,296,082	..Hamilton....	“
190,013	173,019	....	24,000	....	387,023	..Kingston......	“
1,860,267	4,537,439	7,050	470,639	15,280	6,890,675	..London......	“
68,988	196,572	....	....	....	265,560	..Ottawa.........	“
84,585	501,390	....	46,606	....	632,581	..Owen Sound ...	“
13,727	270.724	470	91,076	....	375,997	..Perth	“
471,536	1,365,626	4,389	27,000	....	1,868,551	..Peterborough...	“
....	....	....	28,800	....	28,800	..Port Arthur ...	“
907,689	2,614,150	748	....	....	3,522,587	..Prescott	“
157,581	375,842	....	24,695	....	558,118	..St. Catharines..	“
1,900,086	4,158,931	45,081	268,146	....	6,372,244	..Stratford......	“
12,463,661	15,804,505	128,984	208,000	31,492	28,636,642	..Toronto	“
828,278	1,203,690	....	307,000	....	2,338,968	..Windsor.......	“
2,200,845	6,996,963	....	256,718	2,763	9,457,289	..Montreal.......	Que.
....	1,179,374	....	....	....	1,179,374	..Quebec.........	“
....	....	....	131,464	....	131,464	..Sherbrooke	“
104,322	....	....	....	....	104,322	..Terrebonne.....	“
356,000	....	....	740,000	855	1,096,855	..St. John........	N.B
270,609	507,792	5,579	2,000,964	....	2,784,944	..Halifax........	N.S.
48,137	94,707	....	....	....	142,844	..Charlottetown..	P.E.I.
224,235	1,469,949	....	332,600	34,250	2,061,034	..Manitoba......	Man.
....	....	....	53,625	474,646	528,271	..Vancouver......	B.C.
4,000	....	....	387,450	829,088	1,220,538	..Victoria......	“
26,599,004	50,096,031	280,918	5,855,133	1,401,324	84,232,410	.......Totals..........	

Inland Revenue Department,
Ottawa, 17th August, 1891.

for the Year ended 30th June, 1891.

Entered for Consumption at 1 and 2 cents per lb.			Removed to other Divisions.	Exported.	Free and Written off by Authority.	Remaining in Warehouse.	TOTAL.
Lbs.	$	cts.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
194,541	1,970	41	40,000	....	....	84,166	318,707
624,843	6,252	74	144,000	....	....	101,107	869,950
3,792,930	38,860	00	672,057	987,182	75,459	1,635,362	7,162,990
4,416,415	44,164	15	422,544	202,300	....	254,823	5,296,082
292,127	2,944	27	....	....	....	94,896	387,023
4,625,674	46,945	49	272,643	180,000	....	1,812,358	6,890,675
162,164	1,621	64	3,934	....	....	99,462	265,560
412,720	4,147	20	5,400	....	....	214,461	632,581
15,723	177	23	....	....	341,525	18,749	375,997
1,010,012	10,270	48	520,000	....	....	338,539	1,868,551
28,800	288	00	....	....	....	....	28,800
2,482,315	25,177	06	129,640	....	....	910,632	3,522,587
429,384	4,293	84	....	....	....	128,734	558,118
3,246,398	33,019	98	1,538,800	218,000	42,841	1,326,205	6,372,244
17,035,733	171,968	69	1,897,608	3,147,475	....	6,555,826	28,636,642
1,855,153	18,815	23	....	....	....	483,815	2,338,968
7,020,372	70,203	72	....	....	....	2,436,917	9,457,289
1,179,374	11,793	74	....	....	....	....	1,179,374
131,464	1,314	64	....	....	....	....	131,464
46,890	468	90	57,432	....	....	....	104,322
820,855	8,208	55	....	....	....	276,000	1,096,855
2,053,093	20,711	93	....	....	565,900	165,951	2,784,944
136,000	1,360	00	....	....	....	6,844	142,844
1,576,021	16,070	73	147,075	....	....	337,938	2,061.034
520,737	5,247	37	....	....	....	7,534	528,271
1,176,538	12,249	18	4,000	....	....	40,000	1,220,538
*55,286,276	558,545	17	5,855,133	4,734,957	1,025,725	17,330,319	84,232,410

*54,718,035	$547,180 35 at 1 cent per lb.
568,241	11,364 82 " 2 " "
55,286,276	558,545 17

E. MIALL,
Commissioner.

APPENDIX A—*Continued*—MALT.

DR. No. 9.—COMPARATIVE STATEMENT of Malt Warehouse

Remaining in Warehouse from last year.	Placed in Warehouse.	Increases.	Received from other Divisions.	Imported.	Total.	PROVINCES.
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	1890.
21,363,585	50,300,508	157,084	2,693,824	56,277	74,571,278	....Ontario
2,481,496	8,365,584	1,173	440,894	1,727	11,290,874	....Quebec
72,000	....	....	1,179,635	1,822	1,253,457	....New Brunswick
282,489	665,886	14,685	1,832,889	1,968	2,797,917	Nova Scotia
20,086	120,051	....	....	....	140,137	....Prince Edward Island.
534,406	1,098,700	....	217,741	155,550	2,006,397	....Manitoba
10,560	18,110	....	....	1,422,252	1,450,922	....British Columbia
24,764,622	60,568,839	172,942	6,364,983	1,639,596	93,510,982	.......Totals
						1891.
23,390,856	39,847,246	275,339	1,952,312	59,722	65,525,475	....Ontario
2,305,167	8,176,337	....	388,182	2,763	10,872,449	....Quebec
356,000	....	....	740,000	855	1,096,855	... New Brunswick
270,609	507,792	5,579	2,000,964	....	2,784,944	....Nova Scotia
48,137	94,707	....	....	....	142,844	....Prince Edward Island.
224,235	1,469,949	....	332,600	34,250	2,061,034	...Manitoba
4,000	....	....	441,075	1,303,734	1,748,809	....British Columbia
26,599,004	50,096,031	280,918	5,855,133	1,401,324	84,232,410	.......Totals

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

Returns for the Years ended 30th June, 1890 and 1891. **Cr.**

Entered for Consumption at 1 and 2 cents per lb.			Removed to other Divisions.	Exported.	Free, and Written off by Authority.	Remaining in Warehouse.	Total.
Lbs.	$	cts.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
37,304,545	373,045	45	6,294,076	7,101,750	480,051	23,390,856	74,571,278
7,855,851	78,558	51	70,907	....	1,058,949	2,305,167	11,290,874
897,457	8,974	57	....	....	....	356,000	1,253,457
2,022,600	20,226	00	....	9,583	495,125	270,609	2,797,917
92,000	920	00	....	....	....	48,137	140,137
1,782,162	17,821	62	....	....	....	224,235	2,006,397
1,446,922	14,469	22	....	....	....	4,000	1,450,922
51,401,537	514,015	37	6,364,983	7,111,333	2,034,125	26,599,004	93,510,982
40,624,932	410,916	41	5,646,626	4,734,957	459,825	14,059,135	65,525,475
8,378,100	83,781	00	57,432	....	....	2,436,917	10,872,449
820,855	8,208	55	....	....	....	276,000	1,096,855
2,053,093	20,711	93	....	....	565,900	165,951	2,784,944
136,000	1,360	00	....	....	....	6,844	142,844
1,576,021	16,070	73	147,075	....	....	337,938	2,061,034
1,697,275	17,496	55	4,000	....	....	47,534	1,748,809
*55,286,276	558,545	17	5,855,133	4,734,957	1,025,725	17,330,319	84,232,410

*54,718,035	$547,180	35	at 1 cent per lb.
568,241	11,364	82	at 2 cents do
55,286,276	$558,545	17	

E. MIALL,
Commissioner.

APPENDIX A—*Continued*—MALT LIQUOR.

No. 10.—RETURN of Malt Liquor Manufactured for the Year ended 30th June, 1891.

REVENUE DIVISIONS.		No. of Brewers.	License Fees.	Total Quantity of Malt used for Brewing.	Sugar, Syrup, &c., used.	Malt Liquor manufactured.	Malt Liquor Exported and used by H.M. Army and Navy.	Duty Collected, including License Fees.
			$	Lbs.		Galls.	Galls.	$ cts.
Belleville	Ont.	2	100	151,189		46,250		100 00
Brantford	"	3	150	522,446		160,240		150 00
Guelph	"	13	650	3,725,449		1,331,573		650 00
Hamilton	"	3	150	2,527,398		909,673		150 00
Kingston	"	2	100	289,063		89,475		100 00
London	"	7	325	4,666,038	2,420	1,711,808	120	437 00
Ottawa	"	4	200	535,421		169,253		200 00
Owen Sound	"	3	150	457,654		166,200		150 00
Perth	"	1	50	35,439	596	10,700		101 40
Peterborough	"	5	250	1,019,166		333,798		250 00
Port Arthur	"	1	50	45,709		19,378		50 00
Prescott	"	3	150	2,329,519		751,853		150 00
St. Catharines	"	2	100	824,860		278,330		100 00
Stratford	"	9	450	1,171,466		500,933		450 0
Toronto	"	16	800	13,327,815	44,800	4,867,524		4,456 4
Windsor	"	4	175	862,305		314,981		175 0
Totals		78	3,850	32,490,937	47,816	11,661,969	120	7,669 8
Joliette	Que.	2	100	49,070		16,830		100 0
Montreal	"	10	500	11,560,939		3,729,466		500 0
Quebec	"	1	50	1,356,692		423,700		50 0
Sherbrooke	"	2	100	225,184		67,949		100 0
St. Hyacinthe	"	1	50	20,620		5,840		50 0
St. Johns	"	1	50	1,440				50 0
Terrebonne	"	2	75	44,616		14,675		75 0
Three Rivers	"	1	50	3,625		1,986		50 0
Totals		20	975	13,262,186		4,260,446		975 0
St. John, N.B.		2	100	868,457		253,473		100 00
Halifax, N.S.		5	250	2,193,865		775,787	175,849	250 00
Charlottetown, P.E.I.		1	50	137,800		44,400		50 00
Winnipeg, Man		9	450	1,591,786		495,744		450 00
Vancouver, B.C.		10	475	522,284		185,755		475 00
Victoria, B.C.		11	525	1,268,599		391,609	15,329	525 00
Totals		136	6,675	52,335,914	47,816	18,069,183	*191,298	10,494 80

*Exported	14,933 galls.
Used by H.M. Army and Navy	176,365 "

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

APPENDIX A—*Continued*—MALT LIQUOR.

No. 11.—COMPARATIVE STATEMENT of Malt Liquor manufactured for the Years ended 30th June, 1890 and 1891.

PROVINCES.	ewers.	License	Total Quantity of Malt used	Sugar, Syrup, &c.	Malt Liquor Manu-	Malt Liquor Exported and	Duty Collected including
1891.							
						0	7,669 80
						.	975 00
						..	100 00
						9	250 00
						.	50 00
						..	450 00
						9	1,000 00
						8	10,494 80

ERRATA.

(*To face page* 70.)

Column headed "Malt Liquor Manufactured," opposite Brantford Division, "160,240," should read "160,340," and opposite London Division "1,711,808" should read "1,711,828"; also total "11,661,969" for Ontario should read "11,662,089," and total at botttom of column, "18,069,183," should read "18,069,303."

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

APPENDIX A—*Continued*—TOBACCO.

No. 12.—RETURN of Manufactures

INLAND REVENUE DIVISIONS.	LICENSES.		Total weight of Leaf and other material actually used in production of Tobacco made and excised.	TOBACCO MANUFACTURED.			CIGARETTES MANU	
	No.	Amount		At 20 and 25 cents per lb.	Paid Duty	Warehoused.	At $1.50 & $2 per M.	Paid Duty
		$ cts.	Lbs.	Lbs.	Lbs.	Lbs.	No.	No.
Hamilton	1	75 00	1,236,036	1,248,737	161,166½	1,087,570½	....	....
London	1	75 00	34,308	34,318¼	27,537¼	6,781	....	....
Toronto	1	75 00	371,707	392,721	77,997½	314,723½	....	....
Windsor	1	75 00	3,827	3,631¼	3,631¼	....	119,240	119,240
Ontario	4	300 00	1,645,878	1,679,407½	270,332½	1,409,075	119,240	119,240
Joliette	2	100 00	113,448	....	....	....	....	....
Montreal	13	837 50	6,894,166	6,614,168¼	390,165¼	6,224,003	41,412,120	19,287,360
Quebec	5	325 00	586,357	485,906½	405,631½	80,275	....	....
Sorel	1	50 00	11,337	....	....	....	....	....
Three Rivers	1	75 00	422	....	....	....	....	....
Quebec	22	1,387 50	7,605,730	7,100,074¾	795,796¾	6,304,278	41,412,120	19,287,360
Halifax	2	150 00	163,739	168,498	11,098	157,400	....	....
Pictou	1	75 00	41,164	47,831	13,608	34,223	....	....
Nova Scotia	3	225 00	204,903	216,329	24,706	191,623	....	....
Charlottetown, P.E.I.	2	150 00	204,829	203,160	119,274	83,886	....	....
Totals	31	2,062 50	9,661,340	9,198,971¼	1,210,109¼	7,988,862	41,531,360	19,406,600

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

for the Year ended 30th June, 1891.

FACTURED.	CANADIAN TOBACCO MANUFACTURED.			SNUFF MANUFACTURED.				DUTY COLLECTED, INCLUDING LICENSE FEES.
Warehoused	At 5c. per lb.	Paid Duty	Warehoused.	At 20 and 25 cents per lb.	Paid Duty	At 14 and 18 cents per lb.	Paid Duty	
No.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	$ cts.
....	....	....	....	....	....	....	....	32,458 30
....	....	....	....	....	....	....	....	5,588 59
....	....	....	....	....	....	....	....	15,838 75
....	....	....	....	....	....	....	....	980 13
....	....	....	....	....	....	....	....	54,865 77
....	117,579	15,206½	102,372½	....	....	....	....	860 34
22,124,760	155,473¼	105,223	50,250¼	4,590	4,590	89,900	89,900	127,138 37
....	23,919	23,919	....	....	....	157,365	157,365	105,107 15
....	11,166	5,919	5,247	....	....	....	....	345 95
....	....	....	....	....	....	235	235	107 90
22,124,760	308,137¼	150,267½	157,869¾	4,590	4,590	247,500	247,500	233,559 71
....	....	....	....	....	....	....	....	2,385 20
....	....	....	....	....	....	....	....	2,801 00
....	....	....	....	....	....	....	....	5,186 20
....	....	....	....	....	....	....	....	24,155 00
22,124,760	308,137¼	150,267½	157,869¾	4,590	4,590	247,500	247,500	317,766 68

E. MIALL,
Commissioner.

APPENDIX A—*Continued*—TOBACCO.

No. 13.—COMPARATIVE STATEMENT of Manufactures

PROVINCES.	LICENSES.		Total weight of Leaf and other material actually used in production of Tobacco made and excised.	TOBACCO MANUFACTURED.			CIGARETTES MANU-	
	No.	Amount		At 20 & 25 cts. per lb.	Paid Duty.	Warehoused.	At $1.50 & $2 per M.	Paid Duty.
1890.		$ cts.	Lbs.	Lbs.	Lbs.	Lbs.	No.	No.
Ontario........	3	225 00	1,795,751	1,819,004¼	251,855¾	1,567,148½	1,175,240	1,155,240
Quebec........	23	1,375 00	7,807,344	6,906,417	621,121	6,285,296	33,031,700	17,071,200
Nova Scotia....	3	225 00	250,662	260,336½	24,388½	235,948	....	....
P. E. Island...	2	150 00	203,109	207,026	85,593	121,433	....	....
Total......	31	1,975 00	10,056,866	9,192,783¾	982,958¼	8,209,825½	34,206,940	18,226,440
1891.								
Ontario.........	4	300 00	1,645,878	1,679,407½	270,332½	1,409,075	119,240	119,240
Quebec........	22	1,387 50	7,605,730	7,100,074¾	795,796¾	6,304,278	41,412,120	19,287,360
Nova Scotia....	3	225 00	204,903	216,329	24,706	191,623	....	....
P. E. Island....	2	150 00	204,829	203,160	119,274	83,886	....	....
Total.......	31	2,062 50	9,661,340	9,198,971¼	1,210,109¼	7,988,862	41,531,360	19,406,600

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

for the Years ended 30th June, 1890 and 1891.

FACTURED.	CANADIAN TOBACCO MANUFACTURED.			SNUFF MANUFACTURED.						DUTY COLLECTED, INCLUDING LICENSE FEES.
Warehoused	At 5 cts. per lb.	Paid Duty.	Warehoused.	At 20 & 25 cts. per lb.	Paid Duty.	Warehoused.	At 14 & 18 cts. per lb.	Paid Duty.	Warehoused.	
No.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	$ cts.
20,000	....	....	....	.....	...	.....	....	....	.....	52,351 50
15,960,500	644,735	243,516½	401,218½	4,830	4,730	100	252,890	252,870	20	199,729 75
....	....	....	....	.....	.....	....	....	....	.....	5,102 70
....	....	....	....	.....	.....	.....	....	....	....	17,268 60
15,980,500	644,735	243,516½	401,218½	4,830	4,730	100	252,890	252,870	20	274,452 55
....	....	....	....	.....	.....	.....	....	....	....	54,865 77
22,124,760	308,137¼	150,267½	157,869¾	4,590	4,590	.....	247,500	247,500	.....	233,559 71
....	....	....	....	.....	.....	.....	....	....	....	5,186 20
....	....	....	....	...	.....	...	....	....	.....	24,155 00
22,124,760	308,137¼	150,267½	157,869¾	4,590	4,590	.....	247,500	247,500	.....	317,766 68

E. MIALL,
Commissioner.

r for the Years ended 30th June, 1890 and 1891.

Ex-Warehoused for Excise Duty.				Ex-Warehoused for Removal to other Divisions.			Tobacco Ex-Warehoused for Exportation, &c.				Writte by Autho	
Tobacco at 20c. and 25c. per lb.	Cigarettes at $1.50 and $2.00 per M.	Canadian Tobacco at 5c. per lb.	Duty.	Tobacco.	Cigarettes.	Canadian Tobacco.	Exported.	Snuff.	Cigarettes.	Ships' Stores.	Tobacco.	
Lbs.	No.	Lbs.	$ cts.	Lbs.	No.	Lbs.	Lbs.	Lbs	No.	Lbs	Lbs	
3,518,010½	....	....	703,602 10	675,478	....	....	9,575½	...	20,000	....	....	..
2,303,305¾	10,764,000	307,472½	492,181 01	4,032,124½	...	99,277	99,707¾	120	2,176,500	....	50	15
679,701	....	....	135,940 20	1,448	....	....	....	...	....	....	....	..
773,750½	....	1,528	154,826 50	20,000	....	634	30,552	...	....	...	...	..
107,314½	....	....	21,462 90	8,383	....	....	410	....	....	....	....	..
474,496	....	....	94,899 20	1,125	....	....	....	...	....	....	....	...
73,689½	....	....	14,737 90	....	....	....	....	...	....	402½	....	..
....	....	....	....	....	....	....	....	..	....	....	....	....
7,930,267¼	10,764,000	309,000½	1,617,649 81	4,738,558½	...	99,911	140,245¼	120	2,196,500	402½	50	15
3,325,980	....	....	669,681 01	736,137½	....	....	19,555½	....	....	....	....	...
2,329,475½	16,660,000	205,026¾	506,318 58	3,929,263	10,000	37,403	58,158	...	4,104,760	....	....	...
609,279½	....	....	122,861 33	360	....	....	....	....	....	....	....	..
789,742½	....	2,485	159,073 10	17,830	....	....	19,016	....	10,000	35	800	..
89,076	....	....	17,820 60	6,826	....	....	862	...	....	....	....	..
522,993½	....	....	105,237 90	....	..	....	43	...	....	....	....	...
117,393	....	....	23,674 60	1,400	....	....	....	...	....	....	..	...
....	....	....	....	....	....	....	....	....	....	....	.	..
7,783,940	16,660,000	207,511¾	1,604,667 12	4,691,816½	10,000	37,403	97,634½	....	4,114,760	35	800	...

for the Years ended 30th June, 1890 and 1891.

EX-WAREHOUSED FOR EXCISE DUTY.				EX-WAREHOUSED FOR REMOVAL to OTHER DIVISIONS.			TOBACCO EX-WAREHOUSED FOR EXPORTATION, &C.				WRITTE BY AUTHO	
Tobacco at 20c. and 25c. per lb.	Cigarettes at $1.50 and $2.00 per M.	Canadian Tobacco at 5c. per lb.	Duty.	Tobacco.	Cigarettes.	Canadian Tobacco.	Exported.	Snuff.	Cigarettes.	Ships' Stores.	Tobacco.	
Lbs.	No.	Lbs.	$ cts.	Lbs.	No.	Lbs.	Lbs.	Lbs	No.	Lbs	Lbs	N
3,518,010½	....	....	703,602 10	675,478	....	....	9,575½	...	20,000	....	....	.
2,303,305¼	10,764,000	307,472½	492,181 01	4,032,124½	...	99,277	99,707¾	120	2,176,500	....	50	15
679,701	....	....	135,940 20	1,448	...	....	....	...	....	....	...	..
773,750½	....	1,528	154,826 50	20,000	....	634	30,552	...	....	...	...	..
107,314½	....	....	21,462 90	8,383	....	....	410	...	....	...	...	..
474,496	....	....	94,899 20	1,125	....	....	....	...	....	....	....	...
73,689½	....	....	14,737 90	....	....	....	....	....	....	402½	....	..
....	....	....	....	....	....	....	....	..	....	....	....	...
7,930,267¼	10,764,000	309,000½	1,617,649 81	4,738,558½	...	99,911	140,245¼	120	2,196,500	402½	50	15
3,325,980	....	....	669,681 01	736,137½	....	....	19,555½	....	....	....	....	...
2,329,475½	16,660,000	205,026¾	506,318 58	3,929,263	10,000	37,403	58,158	...	4,104,760	....	....	...
609,279½	....	....	122,861 33	360	....	....	....	....	....	...	....	..
789,742½	....	2,485	159,073 10	17,830	....	....	19,016	....	10,000	35	800	..
89,076	....	....	17,820 60	6,826	....	....	862	....	....	....	....	..
522,993½	....	....	105,237 90	....	..	....	43	...	....	....	....	...
117,393	....	....	23,674 60	1,400	....	....	....	....	....	....	..	...
....	....	....	....	....	..	....	....	....	....	...	.	..
7,783,940	16,660,000	207,511¾	1,604,667 12	4,691,816½	10,000	37,403	97,634½	....	4,114,760	35	800	...

S OFF ITY.	TAKEN FOR RE-WORKING.		REMAINING IN WAREHOUSE.			TOTAL WEIGHT ACCOUNTED FOR.			
Cigarettes.	Tobacco.	Canadian Tobacco.	Tobacco.	Cigarettes.	Canadian Tobacco.	Tobacco.	Cigarettes.	Canadian Tobacco.	Snuff.
No.	Lbs.	Lbs.	Lbs.	No.	Lbs.	Lbs.	No.	Lbs.	Lbs
.	35,235	..	743,226½	....	......	4,981,525½	20,000	....	...
,000	27,383½	79	967,381½	3,580,000	160,704½	7,429,952½	16,535,500	567,533	120
....	....	......	66,152½	....	.....	747,301½	....	....	....
.....	24,645	....	200,693½	....	1,793	1,049,641	....	3,955	....
.....	332	.....	17,676	....	....	134,115½	....	....	....
...	....	.....	68,816	....	....	544,437	....	....	....
.....	....	.....	10,064½	......	....	84,156½	....	....	....
.....	....	.....	19,719½	....	....	19,719½	....	....	...
,000	87,595½	79	2,093,730	3,580,000	162,497½	14,990,849	16,555,500	571,488	120
....	34,621	...	651,466½	....	....	4,767,760½	....	....	....
.....	58,887½	3,209	1,094,574	4,982,500	109,646½	7,470,358	25,757,260	355,285¼	....
.....	....	.....	55,501	....	....	665,140½	....	....	...
....	4,522	...	169,208	....	....	1,001,153½	10,000	2,485	....
....	1,342	.....	4,041	....	....	102,147	......	....	....
.....	....	......	86,973	....	.....	610,009½	....	....	....
.....	....	..	20,025	....	....	138,818	....	....	....
....	....	......	19,719½	....	....	19,719½	....	....	....
.....	99,372½	3,209	2,101,508	4,982,500	109,646½	14,775,106½	25,767,260	357,770¼	.. .

E. MIALL,
Commissioner.

APPENDIX A—*Continued*—RAW LEAF TOBACCO, INCLUDING STEMS, SCRAPS AND CUTTINGS.

No. 16.—RETURN for the Year ended 30th June, 1891, and Comparative Statement for Years 1890 and 1891.

Remaining in Warehouse from last Year.	Placed in Warehouse.	Placed in Warehouse from other Divisions.	Total Weights to be Accounted for.	INLAND REVENUE DIVISIONS.	Ex-Warehoused for Duty, being Deficiencies on Samples, &c.		Ex-Warehoused for Removal to other Divisions.	Ex-Warehoused for Exportation.	Written off by Authority.	Taken for Horticultural purposes.	Ex-Warehoused for Manufactory.	Remaining in Warehouse.	Total Weights Accounted for.
					Quantity.	Duty.							
Lbs.	Lbs.	Lbs.	Lbs.	1890.	Lbs.	$ cts.	Lbs.	Lbs.	Lbs	Lbs.	Lbs.	Lbs.	Lbs.
		242	242	Belleville						242			242
1,264	12,559	5,559	19,382	Brantford			4,428	7,423			7,531		19,382
102	5,446	6,107	11,655	Guelph			233	2,020			9,402		11,655
322,252	1,315,479	5,402	1,643,133	Hamilton			1,377	246,965			1,382,942	11,849	1,643,133
	4,217	2,836	7,053	Kingston			308	4,114			2,631		7,053
10,365	43,890	45,731	99,986	London			11,711	22,013			65,717	545	99,986
		2,117	2,117	Ottawa							2,117		2,117
	722		722	Owen Sound				722					722
		205	205	Perth							205		205
	1,035	7,078	8,113	Prescott			1,875				6,238		8,113
	3,288	624	3,912	St. Catharines			146	3,142			624		3,912
	656	1,828	2,484	Stratford			326	330			1,828		2,484
	35,742	13,620	49,362	Toronto			10,706	25,036			12,753	867	49,362
	30,299	285	30,584	Windsor			28,783	1,516			165	120	30,584
333,983	1,453,333	91,634	1,878,950				59,893	313,281		242	1,492,153	13,381	1,878,950
240		102	342	Joliette							102	240	342
22,534	910,989½	25,283	958,806½	Montreal	101½	30 45	115,576	133,384			83,341	626,404	958,806½
		24,371	24,371	Quebec			558				23,813		24,371
2,220	3,449	655	6,324	Sherbrooke			180	3,924			2,220		6,324
	5,173	3,868	9,041	St. John's			483	51			8,507		9,041
		8,033	8,033	Three Rivers							8,033		8,033
24,994	919,611½	62,312	1,006,917½		101½	30 45	116,797	137,359			126,016	626,644	1,006,917½
	7,279	7,761	15,040	St. John, N.B			636	6,643			7,761		15,040

APPENDIX A – *Continued*—RAW LEAF TOBACCO, &c.—*Concluded.*

No. 16.—COMPARATIVE STATEMENT for the Years ending 30th June, 1890 and 1891.

Remaining in Warehouse from last Year.	Placed in Warehouse.	Placed in Warehouse from other Divisions.	Total Weights to be Accounted for.	INLAND REVENUE DIVISIONS.	Ex-Warehoused for Duty, being Deficiencies on Samples, &c.		Ex-Warehoused for removal to other Divisions.	Ex-Warehoused for Exportation.	Written off by Authority.	Taken for Horticultural purposes.	Ex-Warehoused for Manufactory.	Remaining in Warehouse.	Total Weights Accounted for.
					Quantity.	Duty.							
Lbs.	Lbs.	Lbs.	Lbs.		Lbs.	$ cts.	Lbs.	Lbs.	Lbs	Lbs.	Lbs.	Lbs.	Lbs.
....	1,434	1,884	3,318	..Halifax, N.S......	....	....	....	1,434	....	....	....	1,884	3,318
1,298	4,133	16,802	22,233	..Winnipeg, Man	....	....	4,133	....	....	....	18,100	....	22,233
....	....	4,851	4,851	..Vancouver, B.C	....	....	....	....	....	....	4,851	....	4,851
....	4,667	782	5,449	..Victoria, B.C.	....	....	4,567	100	....	....	782	....	5,449
....	4,667	5,633	10,300		....	....	4,567	100	....	....	5,633	....	10,300
360,275	2,390,457½	186,026	2,936,758½	.... Totals....	101½	30 45	186,026	458.817	....	242	1,649,663	641,909	2,936,758½
956,371	795,067	58,184	1,809,622	. Ontario.	....	....	25,839	464,716	....	....	985,084	333,983	1,809,622
36,814	450,637	45,117	532,568	..Quebec	89½	26 85	92,838	338,048	876	....	75,722½	24,994	532.568
....	1,491	4,810	6,301	..New Brunswick........	....	....	....	1,491	....	....	4,810	....	6,301
....	1,557	....	1,557	..Nova Scotia	....	....	....	1,557	....	....	....	....	1,557
....	2,976	10,585	13,561	..Manitoba........	....	....	2,544	971	....	....	8,748	1,298	13,561
758	464	2,619	3,841	..British Columbia........	....	....	94	370	....	....	3,377	....	3,841
993,943	1,252,192	121,315	2,367,450		89½	26 85	121,315	807,153	876	...	1,077,741½	360,275	2,367,450
				1891.									
333,983	1,453,333	91,634	1,878,950	..Ontario........	....	....	59,893	313,281	....	242	1,492,153	13,381	1,878,950
24,994	919,611½	62,312	1,006,917½	..Quebec........	101½	30 45	116,797	137,359	....	....	126,016	626,644	1,006,917½
....	7,279	7,761	15,040	..New Brunswick........	....	....	636	6,643	....	....	7,761	....	15,040
....	1,434	1,884	3,318	..Nova Scotia	....	....	....	1,434	....	....	....	1,884	3,318
1,298	4,133	16,802	22,233	..Manitoba........	....	....	4,133	....	....	....	18,100	....	22,233
....	4,667	5,633	10,300	..British Columbia........	....	....	4,567	100	....	....	5,633	....	10,300
360,275	2,390,457½	186,026	2,936,758½		101½	30 45	186,026	458,817	...	242	1,649,663	641,909	2,936,758½

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

E. MIALL,
Commissioner.

APPENDIX A—*Continued*—CANADA TWIST TOBACCO.

No. 17.—STATEMENT of Revenue collected from Canada Twist Tobacco for the Year ended 30th June, 1891.

INLAND REVENUE DIVISIONS.	LICENSES.		Canada Twist, at 5 cts. per lb.	Duty Collected, including Fees.	
	No.	Fees.			
		$	Lbs.	$	cts.
Ottawa	4	8	597	37	85
Cornwall	1	2	440	24	00
Windsor	1	2	350	19	50
Joliette	52	104	51,762¼	2,692	11
Montreal	44	88	19,335½	1,054	77
Terrebonne	44	88	12,139¼	694	97
Total	146	292	84,624	4,523	20

COMPARATIVE STATEMENT for Years ended 30th June, 1890 and 1891.

YEARS.	PROVINCES.	LICENSES.		Canada Twist, at 5 cts. per lb.	Duty Collected, including Fees.	
		No.	Fees.			
			$	Lbs.	$	cts.
1890	Ontario	9	18	1,102½	73	13
	Quebec	118	236	78,416	4,156	80
	Total	127	254	79,518½	4,229	93
1891	Ontario	6	12	1,387	81	35
	Quebec	140	280	83,237	4,441	85
	Total	146	292	84,624	4,523	20

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

APPENDIX A—*Continued*—CIGARS.

No. 18.—RETURN of Manufactures

INLAND REVENUE DIVISIONS.	LICENSES.		Total weight of Leaf and other material actually used in production.	Deficiencies in production and Stock of Cigars upon which Duty was Collected.
	No.	Amount.		
		$ cts.	Lbs.	No.
Brantford	9	675 00	42,747	1,164
Guelph	8	600 00	31,291	....
Hamilton	13	937 50	58,980	4,077
Kingston	2	150 00	30,740	....
London	18	1,200 00	250,474	....
Ottawa	1	75 00	2,763	....
Owen Sound	1	75 00	2,483	....
Peterborough	1	75 00	2,802	....
Prescott	2	150 00	9,541	....
St. Catharines	3	225 00	15,434	....
Stratford	4	300 00	23,312	....
Toronto	18	1,250 00	111,632	....
Windsor	2	112 50	15,010	....
Ontario	82	5,825 00	597,209	5,241
Joliette	2	125 00	530	....
Montreal	32	2,312 50	882,799	20,160
Quebec	1	37 50	2,031	....
Sherbrooke	3	150 00	37,130	....
Sorel	1	75 00	....	....
St. Hyacinthe	1	75 00	1,234	....
St. Johns	2	150 00	70,186	....
Three Rivers	2	100 00	8,749	....
Quebec	44	3,025 00	1,002,659	20,160
St. John, N.B.	2	150 00	47,734	....
Winnipeg, Man.	2	112 50	14,339	....
Vancouver	5	375 00	18,971	....
Victoria	9	675 00	35,449	....
British Columbia	14	1,050 00	54,420	....
Totals	144	10,162 50	1,716,361	25,401

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

for the Year ended 30th June, 1891.

CIGARS AT $6 AND $7 PER THOUSAND.			CANADIAN CIGARS AT $3 PER THOUSAND.			DUTY COLLECTED, INCLUDING LICENSE FEES.
Produced.	Paid Duty.	Warehoused.	Produced.	Paid Duty.	Warehoused	
No.	No.	No.	No.	No.	No.	$ cts.
2,663,800	1,668,100	995,700	....	....	....	10,690 58
1,906,950	1,051,675	855.275	....	....	....	6,910 05
3,470,175	2,416,725	1,053,450	....	....	....	15,462 31
1,824,090	858,710	964,360	....	....	....	5,309 40
	1,020	at $7.				
15,561,585	10,557,585	5,004,000	....	....	....	64,545 51
174,300	122,700	51,600	....	....	....	811 20
143,050	109,150	33,900	....	....	....	729 90
180,125	180,125	....	....	....	....	1,155 75
547,000	315,000	232,000	....	....	....	2,040 00
857,800	568,150	289,650	....	....	....	3,633 90
1,281,600	1,029,900	251,700	....	....	....	6,479 40
6,960,295	3.323.245	3,637,050	58,100	58,100		[illegible]

ERRATA.

(*To face page* 82.)

Column headed "Weight of Leaf and other Material used in Production," opposite Brantford Division, "42,747" should read "43,040," and total of column, "1,716,361," should read "1,716,654."

2,545,745	1,404,820	1,140,925	....	....	....	8,578 92
857,775	243,450	614,325	....	....	....	1,573 20
925,650	925,650	....	....	....	....	5,928 90
1,758,900	1,520,500	238,400	....	....	....	9,798 00
2,684,550	2,446,150	238,400	....	....	....	15,726 90
99,418,540	61,640,325	37,778,215	663,010	442,910	220,100	381,486 60

E. MIALL,
Commissioner.

APPENDIX A—*Continued*—CIGARS.

No. 19.—COMPARATIVE STATEMENT of Manufactures

PROVINCES.	LICENSES.		Total weight of Leaf and other material actually used in production.	Deficiencies in production and Stock of Cigars upon which Duty was Collected.
	No.	Amount.		
1890.		$ cts.	Lbs.	No.
Ontario	*87	5,987 50	586,577	5,416
Quebec	35	2,537 50	1,077,142	159,976
New Brunswick	2	150 00	40,604	....
Manitoba	1	75 00	15,643	....
British Columbia	14	1,012 50	45,664	....
Total	139	9,762 50	1,765,630	165,392
1891.				
Ontario	82	5,825 00	597,209	5,241
Quebec	44	3,025 00	1,002,659	20,160
New Brunswick	2	150 00	47,734	....
Manitoba	2	112 50	14,339	....
British Columbia	14	1,050 00	54,420	....
Total	144	10,162 50	1,716,361	25,401

* 5 fees paid in 1888-89.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

for the Years ended 30th June, 1890 and 1891.

Cigars at $6 and $7 per Thousand.			Canadian Cigars at $3 per Thousand.			Duty Collected including License Fees.
Produced.	Paid Duty.	Warehoused.	Produced.	Paid Duty.	Warehoused.	
No.	No.	No.	No.	No.	No.	$ cts.
35,325,245	20,969,905	14,355,340	31,750	31,750	....	131,935 69
59,622,420	34,918,305	24,704,115	17,400	17,400	....	213,059 39
2,156,200	1,242,300	913,900	....	....	....	7,603 80

ERRATA.

(*To face page* 84.)

Column headed "Weight of Leaf and other Material used in Production," opposite Ontario, 1891, "597,209" should read "597,502," and total of column, "1,716,361," should read "1,716,654."

2,545,745	1,404,820	1,140,925	....	....	....	8,578 92
857,775	243,450	614,325	....	....	....	1,573 20
2,684,550	2,446,150	238,400	....	....	....	15,726 90
99,418,540	61,640,325	37,778,215	663,010	442,910	220,100	381,486 60

E. MIALL,
Commissioner.

APPENDIX A—*Continued*—CIGAR WAREHOUSE ACCOUNT.

Dr. No. 20.—**Return** for the Year

Remaining in Warehouse from last Year.	Placed in Warehouse.		Placed in Warehouse from other Divisions.	Total Number to be Accounted for.		Inland Revenue Divisions.	Ex-Warehoused for	
	—	Canadian.		—	Canadian.		At $6 p.M.	Can. At $3 p.M.
No.	No.	No.	No.	No.	No.		No.	No.
22,000	....	....	....	22,000	....	..Belleville	13,500	....
258,875	995,700	....	70,000	1,324,575	....	..Brantford.........	1,092,225	....
262,575	855,275	....	....	1,117,850	....	..Guelph	981,150	....
455,000	1,053,450	....	....	1,508,450	....	..Hamilton	1,320,225	....
239,500	964,360	....	....	1,203,860	....	..Kingston..........	924,560	....
830,425	5,004,000	....	10,000	5,844,425	....	..London..	4,367,200	....
12,000	51,600	....	....	63,600	....	.Ottawa..	63,600	....
140,900	33,900	....	296,500	471,300	....	..Owen Sound.	342,450	....
87,550	232,000	....	....	319,550	....	..Prescott.	270,200	....
105,500	289,650	....	25,000	420,150	....	..St. Catharines.	278,400	....
135,500	251,700	....	....	387,200	....	..Stratford	321,700	....
1,276,075	3,637,050	....	571,400	5,484,525	....	..Toronto.	4,297,575	....
173,200	568,900	....	43,000	785,100	....	..Windsor........	500,300	....
3,999,100	13,937,585	....	1,015,900	18,952,585	....	.....*Ontario*.......	14,773,085	....
6,140,490	19,639,810	....	10,000	25,790,300	....	..Montreal........	20,130,650	....
94,350	123,000	....	....	217,350	....	..Quebec..........	151,600	....
314,550	586,410	208,400	....	900,960	208,400	..Sherbrooke.........	764,975	170,050
....	7,600	....	5,000	12,600	....	..St. Hyacinthe......	5,000	....
676,450	1,164,460	....	15,000	1,855,910	....	..St. John's.	1,143,135	....
104,450	325,700	11,700	....	430,150	11,700	..Three Rivers......	293,700	....
7,330,290	21,846,980	220,100	30,000	29,207,270	220,100	.....*Quebec*.........	22,489,060	170,050
595,150	1,140,925	....	....	1,736,075	....	....*St. John, N.B*....	676,200	....
10,900	....	....	....	10,900	....	....*Halifax, N.S.*....	10,900	....
57,700	614,325	....	....	672,025	....	....*Winnipeg, Man*..	572,600	....
164,100	238,400	....	....	402,500	....	....*Victoria, B.C*....	341,950	....
12,157,240	37,778,215	220,100	1,045,900	50,981,355	220,100	.....Totals.	38,863,795	170,050

Inland Revenue Department,
Ottawa, 17th August, 1891.

ended 30th June, 1891. **Cr.**

Excise Duty.	Ex-Warehoused for Removal to other Divisions.	Written off by Authority.	Ex-Warehoused for Exportation.	Ex-Warehoused for Re-working.	Seized.	Remaining in Warehouse.		Total Number Accounted for.	
Duty.						—	Canadian.	—	Canadian.
$ cts.	No.	No.	No.	No.	No.	No.	No.	No.	No.
81 00	....	....	....	....	....	8,500	....	22,000	....
6,553 35	18,000	....	....	....	....	214,350	....	1,324,575	....
5,886 90	10,000	....	....	....	....	126,700	....	1,117,850	....
7,921 35	....	....	....	....	....	188,225	....	1,508,450	....
5,547 36	....	....	....	....	....	279,300	....	1,203,860	....
26,203 20	....	....	....	....	....	1,477,225	....	5,844,425	....
381 60	....	....	....	....	....	....	....	63,600	....
2,054 70	....	....	....	....	....	128,850	....	471,300	....
1,621 20	....	....	....	....	....	49,350	....	319,550	....
1,670 40	....	....	....	....	....	141,750	....	420,150	....
1,930 20	....	....	....	....	....	65,500	....	387,200	....
25,785 45	....	....	....	10,400	....	1,176,550	....	5,484,525	....
3,001 80	15,000	....	....	....	....	269,800	....	785,100	....
88,638 51	43,000	....	....	10,400	....	4,126,100	....	18,952,585	....
120,783 90	952,900	11,985	178,775	....	....	4,515,990	....	25,790,300	....
909 60	....	....	....	....	....	65,750	....	217,350	....
5,100 00	....	....	....	....	....	135,985	38,350	900,960	208,400
30 00	....	....	....	....	7,600	....	....	12,600	....
6,858 81	50,000	....	....	....	....	662,775	....	1,855,910	....
1,762 20	....	....	....	....	....	136,450	11,700	430,150	11,700
135,444 51	1,002,900	11,985	178,775	....	7,600	5,516,950	50,050	29,207,270	220,100
4,057 20	....	....	....	....	....	1,059,875	....	1,736,075	....
65 40	....	....	....	....	....	....	....	10,900	....
3,435 60	....	....	....	....	....	99,425	....	672,025	....
2,051 70	....	....	....	....	....	60,550	....	402,500	....
233,692 92	1,045,900	11,985	178,775	10,400	7,600	10,862,900	50,050	50,981,355	220,100

E MIALL,
Commissioner.

APPENDIX A—*Continued*—CIGAR WAREHOUSE ACCOUNT.

DR. No. 21.—COMPARATIVE STATEMENT for the

Remaining in Warehouse from last Year.	Placed in Warehouse.		Placed in Warehouse from other Divisions.	Total Number to be Accounted for.		Provinces.	Ex-Ware for Exc	
	—	Canadian		—	Canadian		—	Canadian
No.	No.	No.	No.	No.	No.	1890.	No.	No.
4,031,550	14,355,340	....	1,428,700	19,815,590	....	..Ontario.........	15,588,190	....
6,145,575	24,704,115	....	246,150	31,095,840	....	..Quebec....	22,061,950	....
411,250	913,900	....	.. ..	1,325,150	....	..New Brunswick..	730,000	. .....
12,300	....	....	65,700	78,000	....	..Nova Scotia.....	67,100	.. ..
57,700	541,125	.. ..	55,000	653,825	....	..Manitoba.......	596,125	....
134,800	293,350	....	....	428,150	....	..British Columbia	264,050	....
10,793,175	40,807,830	....	1,795,550	53,396,555	....	..... Totals	39,307,415	....
						1891.		
3,999,100	13,937,585	....	1,015,900	18,952,585	....	..Ontario..........	14,773,085	....
7,330,290	21,846,980	220,100	30,000	29,207,270	220,100	..Quebec..........	22,489,060	170,050
595,150	1,140,925	....	....	1,736,075	....	..New Brunswick..	676,200	....
10,900	....	....	....	10,900	....	..Nova Scotia.....	10,900	....
57,700	614,325	....	....	672,025	....	..Manitoba.......	572,600	....
164,100	238,400	....	....	402,500	....	..British Columbia	341,950	....
12,157,240	37,778,215	220,100	1,045,900	50,981,355	220,100	.....Totals......	38,863,795	170,050

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

Years ended 30th June, 1890 and 1891. CR.

HOUSED ISE DUTY.	Ex-Warehoused for Removal to other Divisions.	Written off by authority.	Ex-Warehoused for Exportation.	Ex-Warehoused for Re-working.	Seized.	REMAINING IN WAREHOUSE.		TOTAL NUMBER ACCOUNTED FOR.	
Duty.						—	Canadian	—	Canadian
$ cts.	No.	No.	No.	No.	No.	No.	No.	No.	No.
93,529 14	216,500	2,700	....	9,100	....	3,999,100	....	19,815,590	....
132,371 70	1,579,050	....	124,550	....	....	7,330,290	....	31,095,840	....
4,380 00	....	....	....	....	....	595,150	....	1,325,150	....
402 60	....	....	....	....	....	10,900	....	78,000	....
3,576 75	....	....	....	....	....	57,700	....	653,825	....
1,584 30	....	....	....	....	....	164,100	....	428,150	....
235,844 49	1,795,550	2,700	124,550	9,100	....	12,157,240	....	53,396,555	....
88,638 51	43,000	....	....	10,400	....	4,126,100	....	18,952,585	....
135,444 51	1,002,900	11,985	178,775	....	7,600	5,516,950	50,050	29,207,270	220,100
4,057 20	....	....	....	....	....	1,059,875	....	1,736,075	....
65 40	....	....	....	....	....	....	....	10,900	....
3,435 60	....	....	....	....	....	99,425	....	672,025	....
2,051 70	....	....	....	....	....	60,550	....	402,500	....
233,692 92	1,045,900	11,985	178,775	10,400	7,600	10,862,900	50,050	50,981,355	220,100

Total Excise Duty collected on Tobacco, Cigars and Snuff, including Canada Twist:—

1890—Ex-Manufactory and Ex-Warehouse, including Licenses..........	$2,499,831 91
1891— do do do	2,542,166 97

E. MIALL,
Commissioner.

APPENDIX A—*Continued*—INSPECTION OF PETROLEUM.

No. 22.—Return of Fees for the Inspection of Petroleum for the Year ended 30th June, 1891.

Inland Revenue Divisions.	Packages.						Fees Collected.	
	At 30 cts.	At 10 cts.		At 5 cts.		At 2½ cts		
	Imported.	Canadian.	Imported.	Canadian.	Imported.	Canadian.	$	cts.
Belleville	1,182						354	60
Brantford	122						36	60
Guelph	270						81	00
Hamilton	956	4,845					771	30
Kingston	1,867	988					658	90
London	31	135,389		8		34,049	14,399	90
Ottawa	4,581	12,083	1				2,582	70
Port Arthur	3,759				3,204		1,287	90
Prescott	881				1		264	35
Stratford		2,177				6,300	375	20
Toronto	6,662	26,653					4,663	90
Windsor	1,779		11		90		539	30
Ontario	22,090	182,135	12	8	3,295	40,349	26,015	65
Montreal	12,392	50,244	120				8,754	00
Quebec	1,463						438	90
Quebec	13,855	50,244	120				9,192	90
St. John, N.B		7,043					704	30
Halifax, N.S		299					29	90
Winnipeg, Man	3,707				5,696		1,396	90
Vancouver	299				15,249		852	15
Victoria					44,308		2,215	40
British Columbia	299				59,557		3,067	55
Totals	39,951	239,721	132	8	68,548	40,349	40,407	20

APPENDIX A—*Continued*—INSPECTION OF PETROLEUM.

COMPARATIVE STATEMENT for the Years ended 30th June, 1890 and 1891.

YEARS.	PROVINCES.	PACKAGES.				FEES COLLECTED.
		At 30 cts.	At 10 cts.	At 5 cts.	At 2½ cts.	
						$ cts.
1890	Ontario	21,723	191,832	261	37,830	26,660 17
	Quebec	15,767	39,759	602	....	8,736 10
	New Brunswick	....	5,176	....	....	517 60
	Manitoba	4,461	....	5,284	....	1,602 50
	British Columbia	255	179	42,526	....	2,220 70
	Totals	42,206	236,946	48,673	37,830	39,737 07
1891	Ontario	22,090	182,147	3,303	40,349	26,015 65
	Quebec	13,855	50,364	....	....	9,192 90
	New Brunswick	....	7,043	....	....	704 30
	Nova Scotia	....	299	....	....	29 90
	Manitoba	3,707	....	5,696	....	1,396 90
	British Columbia	299	....	59,557	....	3,067 55
	Totals	39,951	239,853	68,556	40,349	40,407 20

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

APPENDIX A—*Continued*—MANUFACTURES IN BOND.

No. 23—RETURN of Manufactures for the Year ended 30th June, 1891.

REVENUE DIVISIONS.		Number of Licenses.	License Fees.	MATERIALS USED.			PRODUCTS OF MANUFACTURES.			Vinegar entered for Duty Ex-Manufactory.		Entered for Warehouse.		Total Duties Collected, including License Fees.
				Proof Spirits.	Beer, Wine, &c.	Vinegar.	Vinegar at 4 cts. per Gallon.	Crude Fulminate.	Duties accruing.			Vinegar.	Crude Fulminate	
			$	Galls.	Galls.	Galls.	Galls.	Lbs.	$ cts.	Galls.	$ cts.	Galls.	Lbs.	$ cts.
Brantford	Ont.	1	50	4,092·50	17·00	....	17,290·00	...	691 60	3,063·00	122 52	14,227·00	....	172 52
Hamilton	"	2	100	31,611·15	1,325·60	...	160,676·83	.....	6,427 07	99,746·25	3,989 82	60,930·58	....	4,089 82
Kingston	"	1	50	11,251·41	502·57	959·86	46,360·77	....	1,854 43	31,296·49	1,251 85	15,064·28	......	1,301 85
Prescott	"	1	300	51,532·40	....	†260,748	....	31,829	....	....	....	....	31,829	300 00
Toronto	"	3	150	*2,049·77 56,484·73	1,459·90	‡25,604 44·37	313,033·99	...	12,521 29	313,033·99	12,521 29	....	....	12,671 29
Montreal	Que.	2	100	47,906·55	1,417·90	....	259,165·90	.....	10,366 63	224,062·19	8,962 44	35,103·71	....	9,062 44
Quebec	"	1	50	15,171·36	556 62	....	72,370·94	...	2,894 83	65,343·35	2,613 77	7,027·59	....	2,663 77
Terrebonne	"	1	50	4,068·08	....	†18,427 ‡2,274	....	....	....	....	....	....	....	50 00
St. John	N.B.	2	75	*323·24 5,843·28	71·00	....	24,736·23	.....	989 43	24,736·23	989 43	....	....	1,064 43
Totals		14	925	230,334·47	5,350·59	1,004·23 †279,175 ‡27,878	893,634·66	31,829	35,745 28	761,281·50	30,451 12	132,353·16	31,829	31,376 12

Spirits used in manufacture of vinegar	172,360·98 galls.	
" " crude fulminate	55,600·48 "	
" " * Soap, &c.	2,373·01 "	Duty at the rate of 15 cents per gallon collected on this spirits.
	230,334·47 "	

† Lbs. nitric acid. ‡ Lbs. quicksilver.

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

APPENDIX A—*Continued*—MANUFACTURES IN BOND.

No. 24.—Comparative Statement of Manufactures for the Years ended 30th June, 1890 and 1891.

Provinces.	Number of Licenses.	License Fees.	Materials Used.			Products of Manufactures.			Vinegar entered for Duty Ex-Manufactory.		Entered for Warehouse.		Total Duties Collected, including License Fees.
			Proof Spirits.	Beer, Wine, &c.	Vinegar.	Vinegar at 4 cts. per Gall.	Crude Fulminate.	Duties accruing.			Vinegar.	Crude Fulminate.	
		$	Galls.	Galls.	Galls.	Galls.	Lbs.	$ cts.	Galls.	$ cts.	Galls.	Lbs.	$ cts.
1890.													
Ontario...........	9	700	138,194·05	2,745·82	*157,927· †15,517· 557·75	544,286·26	19,219	21,771 41	491,057·41	19,642 28	53,228·85	19,219	20,342 28
Quebec..	3	125	29,421·07	833·06	416·83	151,001·25	....	6,040 04	150,092·05	6,003 67	909·20	....	6,128 67
New Brunswick....	1	50	5,202·59	... .	....	22,600·37	....	904 00	22,600·37	904 00	....	....	954 00
Totals..	13	875	172,817·71	3,578·88	974·58 *157,927· †15,517·	717,887·88	19,219	28,715 45	663,749·83	26,549 95	54,138·05	19,219	27,424 95
1891.													
Ontario........	8	650	157,021·96	3,305·07	*260,748· †25,604· 1,004·23	537,361·59	31,829	21,494 39	447,139·73	17,885 48	90,221·86	31,829	18,535 48
Quebec.........	4	200	67,145·99	1,974·52	*18,427· †2,274·	331,536·84	....	13,261 46	289,405·54	11,576 21	42,131·30	. ...	11,776 21
New Brunswick....	2	75	6,166·52	71 00	....	24,736·23	....	989 43	24,736·23	989 43	....	....	1,064 43
Totals.	14	925	230,334 47	5,350·59	1,004·23 *279,175· †27,878·	893,634·66	31,829	35,745 28	761,281·50	30,451 12	132,353·16	31,829	31,376 12

* Lbs. of nitric acid. † Lbs. of quicksilver.

Inland Revenue Department,
Ottawa, 17th August, 1891.

E. MIALL,
Commissioner.

APPENDIX A—*Continued*—MANUFACTURES IN BOND.

No. 25.—**Statement** showing the Transactions in Vinegar in the Bonded Manufactories in the Dominion of Canada, during the year ended 30th June, 1891.

Divisions.	On hand July 1st, 1890.	Manufactured during year.	Brought into Factory.	Total.	Removed from Factory.	Deficiency June 30th, 1891.	On hand June 30th, 1891.	Total.
	Galls.	Galls.	Galls.	Galls.	Galls.	Galls.	Galls.	Galls.
Brantford	4,614·00	17,290·00		21,904·00	21,904·00			21,904·00
Hamilton	11,086·53	160,676·83		171,763·36	141,141·81		30,621·55	171,763·36
Kingston		46,360·77		46,360·77	43,487·77		2,873·00	46,360·77
Toronto		313,033·99	5,705·70	318,739·69	318,147·15		592·54	318,739·69
Montreal	4,175·23	259,165 90	3,797·50	267,138·63	227,118·59	9·37	40,010·67	267,138·63
Quebec		72,370·94		72,370 94	65,343·35		7,027·59	72,370 94
St. John, N.B.		24,736·23		24,736·23	24,736·23			24,736·23
Totals	19,875·76	893,634·66	9,503·20	923,013·62	841,878 90	9·37	81,125·35	923,013·62

E. MIALL.
Commissioner.

Inland Revenue Department,
Ottawa, 17th August, 1891.

APPENDIX A—*Continued*—MANUFACTURES IN BOND.

No. 26.—Warehouse Return for the Year ended 30th June, 1891.

Remaining in Warehouse from last Year.	Placed in Warehouse.		Total.		Revenue Divisions.	Entered for Consumption.		Crude Fulminate Exported.	Remaining in Warehouse.	Totals.	
Vinegar.	Vinegar.	Crude Fulminate.	Vinegar.	Crude Fulminate.		Vinegar.	Duty.		Vinegar.	Vinegar.	Crude Fulminate.
Galls.	Galls.	Lbs.	Galls.	Lbs.		Galls.	$ cts.	Lbs.	Galls.	Galls.	Lbs.
3,988·00	14,227·00		18,215·00		Brantford	18,215·00	728 60			18,215·00	
10,084·30	60,930·58		71,014·88		Hamilton	40,571·97	1,622 87		30,442·91	71,014·88	
	15,064·28		15,064·28		Kingston	12,334·08	493 35		2,730·20	15,064·28	
		31,829		31,829	Prescott			31,829			31,829
	35,103·71		35,103·71		Montreal	9,012·31	360 49		26,091 40	35,103·71	
	7,027·59		7,027·59		Quebec				7,027·59	7,027·59	
14,072·30	132,353·16	31,829	146,425·46	31,829	Totals	80,133·36	3,205 31	31,829	66,292·10	146,425·46	31,829

E. MIALL,
Commissioner.

Inland Revenue Department,
Ottawa, 17th August, 1891.

APPENDIX A—*Continued*—MANUFACTURES IN BOND.

No. 27.—COMPARATIVE Warehouse Return for the Years ended 30th June, 1890 and 1891.

Remaining in Warehouse from last Year. — Vinegar.	PLACED IN WAREHOUSE.		TOTAL.		PROVINCES.	ENTERED FOR CONSUMPTION.		Vinegar Exported.	Crude Fulminate Exported.	Remaining in Warehouse. — Vinegar.	TOTALS.	
	Vinegar.	Crude Fulminate	Vinegar.	Crude Fulminate.		Vinegar.	Duty.				Vinegar.	Crude Fulminate
Galls.	Galls.	Lbs.	Galls.	Lbs.	1890.	Galls.	$ cts.	Galls.	Lbs.	Galls.	Galls.	Lbs.
15,460·26	53,228·85	19,219	68,689·11	19,219	..Ontario........	54,616·81	2,184 64	......	19,219	14,072·30	68,689·11	19,219
....	909·20 *30·31	....	939·51	....	..Quebec........	....	....	939·51	....	....	939·51	....
15,460·26	54,168·36	19,219	69,628·62	19,219	....Totals......	54,616·81	2,184 64	939·51	19,219	14,072·30	69,628·62	19,219
					1891.							
14,072·30	90,221·86	31,829	104,294·16	31,829	..Ontario.......	71,121·05	2,844 82	......	31,829	33,173·11	104,294·16	31,829
....	42,131·30	....	42,131 30	....	..Quebec......	9,012·31	360 49	....	....	33,118·99	42,131·30	....
14,072·30	132,353·16	31,829	146,425·46	31,829	....Totals......	80,133·36	3,205·31	....	31,829	66,292·10	146,425·46	31,829

* Duty paid vinegar brought in.

	1890.	1891.
Total Duty collected, ex-Manufactory and ex-Warehouse..........	$ 28,734 59	$ 33,656 43
do on Licenses........................	875 00	925 00
	$ 29,609 59	$ 34,581 43

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

APPENDIX A—*Continued*—METHYLATED SPIRITS.

No. 28 (A).—Statement showing quantity of raw material on hand beginning and end of Year, and brought in and used during the Year 1890-91.

Names of Articles.	Stock on hand, 1st July, 1890.	Brought in during the Year.	Total to be accounted for.	Used in manufacture of Methylated Spirits.	Sold.	Stock on hand, 30th June, 1891.	Total accounted for.
	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.		Pr'f Galls.	Pr'f Galls.
Alcohol........	1,544·07	93,356·79	94,900·86	94,900·86	Nil.	Nil.	94,900·86
Wood Naphtha.	1,127·67	32,387·10	33,514·77	30,601·76	15·75	2,897·26	33,514·77

(B.)—Statement showing quantity of raw material used and Methylated Spirits produced therefrom.

Alcohol used (Statement A).	Wood Naphtha used (Statement A).	Methylated Spirits used (Statement C).	Total to be accounted for.	Methylated Spirits produced.	Loss in Manufacture.		Total accounted for.
Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	p.c.	Pr'f Galls.
94,900·86	30,601·76	97·07	125,599·69	124,783·27	816·42	·65	125,599·69

(C.)—Statement showing quantity of Methylated Spirits on hand at beginning and end of Year, and brought in, sold and otherwise accounted for during the Year.

Stock on hand, 1st July, 1890.	Manufactured as above (Statement B).	Brought in.	Total to be accounted for.	Sold.	Used in Methylated Spirits W'rehouse	Re-used in manufacture of Methylated Spirits.	Stock on hand, 30th June, 1891.	Total accounted for.
Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.
2,628·53	124,783·27	110·97	127,522·77	123,472·52	13·90	97·07	3,939·28	127,522·77

E. MIALL,
Commissioner.

Inland Revenue Department,
Ottawa, 17th August, 1891.

APPENDIX A—*Continued*—MANUFACTURES IN BOND.

No. 25.—Statement showing the Transactions in Vinegar in the Bonded Manufactories in the Dominion of Canada, during the year ended 30th June, 1891.

Divisions.	On hand July 1st, 1890.	Manufactured during year.	Brought into Factory.	Total.	Removed from Factory.	Deficiency June 30th, 1891.	On hand June 30th, 1891.	Total.
	Galls.	Galls.	Galls.	Galls.	Galls.	Galls.	Galls.	Galls.
Brantford	4,614·00	17,290·00		21,904·00	21,904·00			21,904·00
Hamilton	11,086·53	160,676·83		171,763·36	141,141·81		30,621·55	171,763·36
Kingston		46,360·77		46,360·77	43,487·77		2,873·00	46,360·77
Toronto		313,033·99	5,705·70	318,739·69	318,147·15		592·54	318,739·69
Montreal	4,175·23	259,165 90	3,797·50	267,138·63	227,118·59	9·37	40,010·67	267,138·63
Quebec		72,370·94		72,370·94	65,343·35		7,027·59	72,370 94
St. John, N.B.		24,736·23		24,736·23	24,736·23			24,736·23
Totals	19,875·76	893,634·66	9,503·20	923,013·62	841,878 90	9·37	81,125·35	923,013·62

E. MIALL.
Commissioner.

Inland Revenue Department,
Ottawa, 17th August, 1891.

APPENDIX A—*Continued*—MANUFACTURES IN BOND.

No. 26.—WAREHOUSE Return for the Year ended 30th June, 1891.

REMAINING IN WAREHOUSE FROM LAST YEAR.	PLACED IN WAREHOUSE.		TOTAL.		REVENUE DIVISIONS.	ENTERED FOR CONSUMPTION.		Crude Fulminate Exported.	REMAINING IN WAREHOUSE.	TOTALS.	
Vinegar.	Vinegar.	Crude Fulminate.	Vinegar.	Crude Fulminate.		Vinegar.	Duty.		Vinegar.	Vinegar.	Crude Fulminate.
Galls.	Galls.	Lbs.	Galls.	Lbs.		Galls.	$ cts.	Lbs.	Galls.	Galls.	Lbs.
3,988·00	14,227·00		18,215·00		Brantford	18,215·00	728 60			18,215·00	
10,084·30	60,930·58		71,014·88		Hamilton	40,571·97	1,622 87		30,442·91	71,014·88	
	15,064·28		15,064·28		Kingston	12,334·08	493 35		2,730·20	15,064·28	
		31,829		31,829	Prescott			31,829			31,829
	35,103·71		35,103·71		Montreal	9,012·31	360 49		26,091 40	35,103·71	
	7,027·59		7,027·59		Quebec				7,027·59	7,027·59	
14,072·30	132,353·16	31,829	146,425·46	31,829	Totals	80,133·36	3,205 31	31,829	66,292·10	146,425·46	31,829

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

APPENDIX A—*Continued*—MANUFACTURES IN BOND.

No. 27.—COMPARATIVE Warehouse Return for the Years ended 30th June, 1890 and 1891.

Remaining in Warehouse from last Year. — Vinegar.	PLACED IN WAREHOUSE.		TOTAL.		PROVINCES.	ENTERED FOR CONSUMPTION.		Vinegar Ex-ported.	Crude Fulminate Ex-ported.	Remaining in Warehouse. — Vinegar.	TOTALS.	
	Vinegar.	Crude Fulminate	Vinegar.	Crude Fulmin-ate.		Vinegar.	Duty.				Vinegar.	Crude Fulminate
Galls.	Galls.	Lbs.	Galls.	Lbs.	1890.	Galls.	$ cts.	Galls.	Lbs.	Galls.	Galls.	Lbs.
15,460·26	53,228·85	19,219	68,689·11	19,219	..Ontario........	54,616·81	2,184 64	......	19,219	14,072·30	68,689·11	19,219
....	909·20 *30·31	....	939·51	....	..Quebec........	....	....	939·51	......	......	939·51	......
15,460·26	54,168·36	19,219	69,628·62	19,219	....Totals......	54,616·81	2,184 64	939·51	19,219	14,072·30	69,628·62	19,219
					1891.							
14,072·30	90,221·86	31,829	104,294·16	31,829	..Ontario.......	71,121·05	2,844 82	......	31,829	33,173·11	104,294·16	31,829
....	42,131·30	....	42,131·30	......	..Quebec......	9,012·31	360 49	......	......	33,118·99	42,131·30	......
14,072·30	132,353·16	31,829	146,425·46	31,829	....Totals......	80,133·36	3,205·31	......	31,829	66,292·10	146,425·46	31,829

* Duty paid vinegar brought in.

	1890.	1891.
Total Duty collected, ex-Manufactory and ex-Warehouse..........	$ 28,734 59	$ 33,656 43
do on Licenses....................	875 00	925 00
	$ 29,609 59	$ 34,581 43

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

APPENDIX A—*Continued*—METHYLATED SPIRITS.

No. 28 (A).—**Statement** showing quantity of raw material on hand beginning and end of Year, and brought in and used during the Year 1890-91.

Names of Articles.	Stock on hand, 1st July, 1890.	Brought in during the Year.	Total to be accounted for.	Used in manufacture of Methylated Spirits.	Sold.	Stock on hand, 30th June, 1891.	Total accounted for.
	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.		Pr'f Galls.	Pr'f Galls.
Alcohol........	1,544·07	93,356·79	94,900·86	94,900·86	Nil.	Nil.	94,900·86
Wood Naphtha.	1,127·67	32,387·10	33,514·77	30,601·76	15·75	2,897·26	33,514·77

(B.)—**Statement** showing quantity of raw material used and Methylated Spirits produced therefrom.

Alcohol used (Statement A).	Wood Naphtha used (Statement A).	Methylated Spirits used (Statement C).	Total to be accounted for.	Methylated Spirits produced.	Loss in Manufacture.		Total accounted for.
Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	p.c.	Pr'f Galls.
94,900·86	30,601·76	97·07	125,599·69	124,783·27	816·42	·65	125,599·69

(C.)—**Statement** showing quantity of Methylated Spirits on hand at beginning and end of Year, and brought in, sold and otherwise accounted for during the Year.

Stock on hand, 1st July, 1890.	Manufactured as above (Statement B).	Brought in.	Total to be accounted for.	Sold.	Used in Methylated Spirits W'rehouse	Re-used in manufacture of Methylated Spirits.	Stock on hand, 30th June, 1891.	Total accounted for.
Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.	Pr'f Galls.
2,628·53	124,783·27	110·97	127,522·77	123,472·52	13·90	97·07	3,939·28	127,522·77

E. MIALL,
Commissioner.

Inland Revenue Department,
Ottawa, 17th August, 1891.

APPENDIX A—*Continued.*

No. 29.—STATEMENT of Lumber Measured, Culled and Counted, through the Office of the Supervisor of Cullers at the Port of Quebec during the Year ended 30th June, 1891.

Pieces.	Description of Timber.	Measured, Culled or Counted.	Tons Standard.	Rate.			Office Fees.	Cullers' Fees.	Total Amount Accrued.
				Office Fee.	Cullers' Fee.	Total Fees.			
			Tons. Pts.	Cts.	Cts.	Cts.	$ cts.	$ cts.	$ cts.
83,714	Waney White pine	Stringed	125,896 12						
4,708	" Ash	"	3,850 11						
90	" Oak	"	172 21						
1	" Elm	"	2 10						
7	" Tamarac	"	7 18						
100	" Butternut	"	53 32						
1,293	" Birch	"	980 18						
541	" Maple	"	616 38						
1	" Spruce	"	0 08						
411	" Whitewood	"	503 05						
51	" Red Pine	"	106 06						
88	" Chestnut	"	86 22						
22	" Sycamore	"	22 38						
1	" Balm of Gilead	"	0 38						
142	" Hickory	"	78 05						
182	" Walnut	"	108 14						
273	" Cherry	"	118 35						
			132,605 11	0 $3\frac{5}{10}$	0 04	0 $7\frac{5}{10}$	4,641 18	5,304 20	9,945 38
79,817	White Pine	Measured	91,899 17						
3	Basswood	"	3 01						
1	Butternut	"	0 17						
			91,902 35	0 01	0 04	0 05	919 06	3,676 08	4,595 14
8,741	Red Pine	"	8,275 32						
19,276	Oak	"	32,272 12						
16,320	Elm	"	19,733 26						
253	Ash	"	178 09						

225	Tamarac	"	178 35						
10,328	Birch	"	3,938 31						
26	Maple	"	15 03						
2	Balm of Gilead	"	2 04						
51	Spruce	"	16 36						
11	Whitewood	"	14 02						
412	Hickory	"	416 35						
4	Walnut	"	5 04						
			65,047 29	0 2$\frac{6}{10}$	0 04	0 6$\frac{6}{10}$	1,691 26	2,601 88	4,293 14
	Longitudinals	....	1,802,200 Sup. ft	....	....	0 05	....	90 11	90 11
18,215	Standard Staves	Culled	18·0·3·11 Per m.	....	....	3 50	12 74	50 55	63 29
9,259	West India do	"	7·7·0·19 "	....	....	1 30	2 48	10 02	12 50
							7,266 72	11,732 84	18,999 56
	Deduct for fractions	....	....	....	....	....	0 12	....	0 12
							7,266 60	11,732 84	18,999 44

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

APPENDIX A—*Continued.*

No. 30.—STATEMENT of Lumber Measured, Culled and Counted, at the Ports of Montreal, Lachine and Sorel, for the Year ended 30th June, 1891.

Pieces.	Description of Timber.	Measured, Culled or Counted.	Tons, Standard.	Rate.	Office Fees.	Cullers' Fees	Total Amount Accrued.
			Tons. Pts.	Cts.	$ cts.	$ cts.	$ cts.
6,339	Square Pine	Measured	3,610 30				
3,230	Flat do	do	2,153 30				
480	Round do	do	309 33				
			6,074 13	5	...	...	303 71
999	Flat Tamarac	do	783 04				
2,898	Cedars	do	1,985 05				
3,430	Round Pine	do	2,828 23				
1,561	Flat do	do	1,182 22				
			6,779 14	80	...	...	216 94
548	Waney Pine	...	543 37	6 2/10	...	...	33 72
1,283	do (stringed)	do	1,053 09	7 5/10	...	...	78 99
3,816	Flat Tamarac	do	2,118 14				
30	Square Elm	do	39 18				
86	do Oak	do	153 02				
			2,310 34	6 6/10	...	...	152 52
8,192	Square Hemlock	do	5,101 09				
2,432	Flat do	do	1,497 00				
5,896	Round do	do	4,537 22				
41,220			11,135 31	3 5/10	...	...	389 75
							1,175 63

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

E. MIALL,
Commissioner.

APPENDIX A—*Continued.*

No. 31.—STATEMENT of Lumber Measured, Culled and Counted, at the Port of Three Rivers, for the Year ended 30th June, 1891.

Pieces.	Description of Timber.	Measured Culled or Counted.	Tons, Standard.	Rate.	Office Fees.	Cullers' Fees	Total Amount Accrued.
			Tons. Pts.	Cts.	$ cts.	$ cts.	$ cts.
68	Square Birch	Measured and culled	22 00	$12\frac{2}{10}$	1 80	0 88	2 68

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

APPENDIX

Dr. No. 32.—HYDRAULIC and other Rents, &c.

Balances due on 1st July, 1890.	Rents and Interests accrued up to 30th June, 1891.	Total.	Number.	Location.	Original Lessee.	Present Occupant.
$ cts.	$ cts.	$ cts.				
....	200 00	200 00	1	Ottawa River...	....	Perley & Pattee.......
....	100 00	100 00	2	do ..	Thompson & Perkins ..	do ..
....	300 00	300 00	3	do ..	Lyman Perkins........	J. R. Booth..........
....	300 00	300 00	4	do ..	John McKay & Co.....	R. Blackburn et al'...
....	100 00	100 00	5	do ..	J. & J. Petrie.........	Mrs. M. Petrie.. ..
....	100 00	100 00	6	do ..	P. H. & L. R. Church...	The Chaudière Electric Light Co........
....	300 00	300 00	7	do ..	....	Pierce & Co........ ..
....	400 00	400 00	8	do ..	Perley & Pattee.........	Philip Thompson.... .
....	100 00	100 00	9	do ..	J. M. Currier..........	N. S. Blaisdell.. ....
....	900 00	900 00	10	do ..	Harris, Bronson & Co....	The Bronson & Weston Lumber Co... ..
200 00	200 00	400 00	11	do ..	Levi Young.	Pierce & Co.... .....
....	104 00	104 00	12	do ..	....	J. R. Booth..... ....
10 00	20 00	30 00	13	do ..	....	Bronson & Weston....
100 00	100 00	200 00	14	do ..	....	do ....
96 00	96 00	192 00	15	do ..	....	Perley & Pattee.....
8 00	8 00	16 00	16	do ..	J. M. Coutlee.......	Mary Conroy..........
650 00	....	650 00	17	do ..	....	John Rochester.. .....
100 00	25 00	125 00	18	do ..	....	N. Tètreau..... ....
1 00	1 00	2 00	19	do ..	G. A. Grier & Co.. . .	Pierce & Co. . .....
4 00	....	4 00	20	do ..	....	Hector Pruneau. .....
200 00	....	200 00	21	do ..	Hon. J. Skead......	....
96 00	... ...	96 00	22	do ..	do	....
620 00	40 00	660 00	23	do ..	....	D. Carmichael........
380 00	....	380 00	24	do .	....	John Rankin.........
....	75 00	75 00	25	do ..	J. R. Booth.	....
9 00	3 52	12 52	1	St. Lawrence River.........	Quebec Harbour Commission.	
6 00	1 00	7 00	2	do ..	L. T. Piuze	....
25 00	25 00	50 00	3	do ..	Rich. and Ont. Nav. Co.	....
400 00	....	400 00	4	Burlington Bay.	N. F. Birely....	S. K. Birely ... .
10 00	. ...	10 00	5	do ..	J. C. McKeand.........	....
5 00	5 00	10 00	6	Brantford .	B. Heyd	....
150 50	43 00	193 50	7	Presqu'Isle Har.	Thomas Webb	....
1 00	1 00	2 00	8	Rondeau do	School Trustees..........	....
4 00	1 00	5 00	9	Collingwood do	Great North. Transit Co.	....
180 00	20 00	200 00	10	Fort Francis....	S. H. Fowler.	Rainy Lake Lumber Co.... ....
165 00	....	165 00	11	British Columbia	A. Peel	....
90 00	....	90 00	12	do ..	Jonathan Maury........	....
....	25 00	25 00	13	do ..	Roderick Finlayson.....	....
....	25 00	25 00	14	do ..	Joseph Spratt...........	....
....	50 00	50 00	15	do ..	Corp. New Westminster.	....
....	1 00	1 00	16	do ..	Bank of British Columbia	....
... ...	10 00	10 00	17	Rivière du Lièvre	Dominion Phosphate Co.	....
2 00	1 00	3 00	18	Charlottetown, P.E.I	Rt.-Rev. Bishop McIntyre	....
....	40 00	40 00	19	Riv. St. Maurice	The Laurentides Pulp Co. (Limited)...........	....
3,512 50	3,720 52	7,233 02				

A.—*Continued.*

Lessees' Accounts, 1890-91. Cr.

Description of Property.	Number.	Date to which the Account is made up.	Written off by Authority.	Paid during Fiscal Year.	Balances due 30th June, 1891.	Total.
				$ cts.	$ cts.	
Lots B and C, Chaudière Street, service ground	1	July 1, 1891	.....	200 00	....	200 00
Lot D do do ..	2	do	.....	100 00	....	100 00
Lots E, F and G, South Head Street, service ground	3	Jan. 1, 1891	.....	300 00	....	300 00
Lots H, I and J, Grist Mill, South Head St..	4	do	.....	300 00	....	300 00
Lot K, Fanning Mill, do ..	5	do	.....	100 00	....	100 00
Lot L, service ground, do ..	6	do	...	100 00	....	100 00
Lots Q, R and T, service ground, North Middle Street	7	do	...	300 00	....	300 00
Lots M, N, O and P, service ground. No water used	8	July 1, 1891	.....	400 00	....	400 00
Lot S, service ground........	9	Jan. 1, 1891	.....	100 00	....	100 00
Lots U, V, W, X, Y and Z, service ground ..	10	July 1, 1891	...	900 00	....	900 00
Two strips of land........	11	Jan. 1, 1892	....	400 00	....	400 00
Lumber yard, head of slides........	12	Sept. 20, 1891	....	104 00	....	104 00
Bridge over slides	13	July 1, 1892	....	30 00	....	30 00
Strip of land (Amelia Island)	14	Jan. 1, 1892	.....	200 00	....	200 00
Reserve, head of island	15	do	.....	192 00	....	192 00
Small island, Duchêne Rapids........	16	Jan. 1, 1891	.....	16 00	....	16 00
Portion of Lot 39, Con. A, Nepean........	17	Feb. 1, 1885	79 16	....	570 84	650 00
Excavated channel, slide and two dams, Little Chaudière	18	Mar. 1, 1891	.....	....	125 00	125 00
Covering over portion of Ottawa slides........	19	Nov. 10, 1891	....	2 00	....	2 00
Site for boathouse, foot of Cathcart Street....	20	May 1, 1890	....	4 00	....	4 00
Water lots opposite Lot 30, Con. A, Nepean..	21	Dec. 1, 1881	...	....	200 00	200 00
Three small islands do ..	22	May 1, 1882	.....	....	96 00	96 00
Water lot, Calumet	23	July 1, 1891	...	....	660 00	660 00
East portion of Hawley's Island........	24	June 30, 1881	.....	....	380 00	380 00
Piece of land, southwest end of Union Bridge.	25	Nov. 12, 1891	.....	75 00	....	75 00
Small lot of land near Custom House, Quebec	1	July 1, 1890	.....	11 52	1 00	12 52
do for an Office, Rivière du Loup	2	July 1, 1891	....	....	7 00	7 00
Roadway from Pier at Coteau Landing........	3	do	.....	....	50 00	50 00
Reserve on Beach........	4	Jan. 1, 1891	400 00	....	....	400 00
do	5	do	10 00	....	....	10 00
Permission to tap Post Office drain........	6	Aug. 1, 1891	....	10 00	....	10 00
Lots on North Bay........	7	May 1, 1891	.....	....	193 50	193 50
Use of old log house formerly used as Custom House, Shrewsbury, Ont	8	Sept. 11, 1890	....	2 00	....	2 00
Use of old breakwater for storing coal........	9	Feb. 5, 1892	.....	5 00	....	5 00
Lot near town of Alberton, for piling lumber.	10	May 1, 1892	.....	....	200 00	200 00
Portion of Assay Office, New Westminster....	11	June 30, 1881	.....	....	165 00	165 00
do do	12	do	.....	....	90 00	90 00
Privilege to erect two Bulk-heads, Rock Bay, Victoria Harbour........	13	June 1, 1892	....	25 00	....	25 00
Privilege to build a Wharf opposite his own property, Victoria Harbour........	14	do	....	25 00	....	25 00
Two Lots of Land for C. P. R. purposes........	15	May 12, 1891	.....	50 00	....	50 00
Right of drainage through Government property, Nanaimo, B.C........	16	Dec. 1, 1891	...	1 00	....	1 00
Permission to erect a landing at Little Rapids, Rivière du Lievre........	17	May 1, 1892	....	....	10 00	10 00
Leave to connect drain to main sewer of Public Buildings	18	May 6, 1892	....	3 00	....	3 00
Tract of Land, Chûte de la Grand'Mère, St. Maurice River	19	June 17, 1892	...	40 00	....	40 00
			489 16	3,995 52	2,748 34	7,233 02

APPENDIX A—*Continued.*

No. 30.—Statement of Lumber Measured, Culled and Counted, at the Ports of Montreal, Lachine and Sorel, for the Year ended 30th June, 1891.

Pieces.	Description of Timber.	Measured, Culled or Counted.	Tons, Standard.	Rate.	Office Fees.	Cullers' Fees	Total Amount Accrued.
			Tons. Pts.	Cts.	$ cts.	$ cts.	$ cts.
6,339	Square Pine	Measured.	3,610 30				
3,230	Flat do	do	2,153 30				
480	Round do	do	309 33				
			6,074 13	5	......	......	303 71
999	Flat Tamarac	do	783 04				
2,898	Cedars	do	1,985 05				
3,430	Round Pine	do	2,828 23				
1,561	Flat do	do	1,182 22				
			6,779 14	80	......	......	216 94
548	Waney Pine	......	543 37	$6\frac{2}{10}$	......	......	33 72
1,283	do (stringed)	do	1,053 09	$7\frac{5}{10}$	......	......	78 99
3,816	Flat Tamarac	do	2,118 14				
30	Square Elm	do	39 18				
86	do Oak	do	153 02				
			2,310 34	$6\frac{6}{10}$	......	......	152 52
8,192	Square Hemlock	do	5,101 09				
2,432	Flat do	do	1,497 00				
5,896	Round do	do	4,537 22				
41,220			11,135 31	$3\frac{5}{10}$	......	......	389 75
							1,175 63

Inland Revenue Department,
Ottawa, 17th August, 1891.

E. MIALL,
Commissioner.

APPENDIX A—*Continued.*

No. 31.—STATEMENT of Lumber Measured, Culled and Counted, at the Port of Three Rivers, for the Year ended 30th June, 1891.

Pieces.	Description of Timber.	Measured Culled or Counted.	Tons, Standard.	Rate.	Office Fees.	Cullers' Fees	Total Amount Accrued.
			Tons. Pts.	Cts.	$ cts.	$ cts.	$ cts.
68	Square Birch	Measured and culled	22 00	12$\frac{2}{10}$	1 80	0 88	2 68

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

APPENDIX

Dr.

No. 32.—Hydraulic and other Rents, &c.

Balances due on 1st July, 1890.	Rents and Interests accrued up to 30th June, 1891.	Total.	Number.	Location.	Original Lessee.	Present Occupant.
$ cts.	$ cts.	$ cts.				
...	200 00	200 00	1	Ottawa River...	...	Perley & Pattee.......
...	100 00	100 00	2	do ..	Thompson & Perkins ..	do ..
...	300 00	300 00	3	do ..	Lyman Perkins..	J. R. Booth..........
...	300 00	300 00	4	do ..	John McKay & Co.....	R. Blackburn et al...
...	100 00	100 00	5	do ..	J. & J. Petrie...	Mrs. M. Petrie.. ..
...	100 00	100 00	6	do ..	P. H. & L. R. Church...	The Chaudière Electric Light Co........
...	300 00	300 00	7	do ..	...	Pierce & Co....... ..
...	400 00	400 00	8	do ..	Perley & Pattee.........	Philip Thompson.... .
...	100 00	100 00	9	do ..	J. M. Currier..........	N. S. Blaisdell.. ....
...	900 00	900 00	10	do ..	Harris, Bronson & Co....	The Bronson & Weston Lumber Co... ..
200 00	200 00	400 00	11	do ..	Levi Young.	Pierce & Co.... .....
...	104 00	104 00	12	do ..	...	J. R. Booth..... ....
10 00	20 00	30 00	13	do ..	...	Bronson & Weston....
100 00	100 00	200 00	14	do ..	...	do ....
96 00	96 00	192 00	15	do ..	...	Perley & Pattee.....
8 00	8 00	16 00	16	do ..	J. M. Coutlee.....	Mary Conroy.........
650 00	...	650 00	17	do ..	...	John Rochester.. .....
100 00	25 00	125 00	18	do ..	...	N. Têtreau..... ....
1 00	1 00	2 00	19	do ..	G. A. Grier & Co.. . .	Pierce & Co. . .....
4 00	...	4 00	20	do ..	...	Hector Pruneau. .....
200 00	...	200 00	21	do ..	Hon. J. Skead..	...
96 00	...	96 00	22	do ..	do	...
620 00	40 00	660 00	23	do ..	...	D. Carmichael........
380 00	...	380 00	24	do .	...	John Rankin.........
...	75 00	75 00	25	do ..	J. R. Booth.	...
9 00	3 52	12 52	1	St. Lawrence River.........	Quebec Harbour Commission.	...
6 00	1 00	7 00	2	do ..	L. T. Piuze	...
25 00	25 00	50 00	3	do ..	Rich. and Ont. Nav. Co.	...
400 00	...	400 00	4	Burlington Bay.	N. F. Birely...	S. K. Birely... ......
10 00	...	10 00	5	do ..	J. C. McKeand....... .	...
5 00	5 00	10 00	6	Brantford .	B. Heyd	...
150 50	43 00	193 50	7	Presqu'Isle Har.	Thomas Webb	...
1 00	1 00	2 00	8	Rondeau do	School Trustees........	...
4 00	1 00	5 00	9	Collingwood do	Great North. Transit Co.	...
180 00	20 00	200 00	10	Fort Francis....	S. H. Fowler.	Rainy Lake Lumber Co.... ....
165 00	...	165 00	11	British Columbia	A. Peel	...
90 00	...	90 00	12	do ..	Jonathan Maury........	...
...	25 00	25 00	13	do ..	Roderick Finlayson.....	...
...	25 00	25 00	14	do ..	Joseph Spratt..........	...
...	50 00	50 00	15	do ..	Corp. New Westminster.	...
...	1 00	1 00	16	do ..	Bank of British Columbia	...
...	10 00	10 00	17	Rivière du Lièvre	Dominion Phosphate Co.	...
2 00	1 00	3 00	18	Charlottetown, P.E.I	Rt.-Rev. Bishop McIntyre	...
...	40 00	40 00	19	Riv. St. Maurice	The Laurentides Pulp Co. (Limited)...........	...
3,512 50	3,720 52	7,233 02				

A.—*Continued.*

Lessees' Accounts, 1890-91. Cr.

Description of Property.	Number.	Date to which the Account is made up.	Written off by Authority.	Paid during Fiscal Year.	Balances due 30th June, 1891.	Total.
				$ cts.	$ cts.	
Lots B and C, Chaudière Street, service ground	1	July 1, 1891		200 00		200 00
Lot D do do	2	do		100 00		100 00
Lots E, F and G, South Head Street, service ground	3	Jan. 1, 1891		300 00		300 00
Lots H, I and J, Grist Mill, South Head St.	4	do		300 00		300 00
Lot K, Fanning Mill, do	5	do		100 00		100 00
Lot L, service ground, do	6	do		100 00		100 00
Lots Q, R and T, service ground, North Middle Street	7	do		300 00		300 00
Lots M, N, O and P, service ground. No water used	8	July 1, 1891		400 00		400 00
Lot S, service ground	9	Jan. 1, 1891		100 00		100 00
Lots U, V, W, X, Y and Z, service ground	10	July 1, 1891		900 00		900 00
Two strips of land.	11	Jan. 1, 1892		400 00		400 00
Lumber yard, head of slides	12	Sept. 20, 1891		104 00		104 00
Bridge over slides	13	July 1, 1892		30 00		30 00
Strip of land (Amelia Island)	14	Jan. 1, 1892		200 00		200 00
Reserve, head of island	15	do		192 00		192 00
Small island, Duchêne Rapids.	16	Jan. 1, 1891		16 00		16 00
Portion of Lot 39, Con. A, Nepean.	17	Feb. 1, 1885	79 16		570 84	650 00
Excavated channel, slide and two dams, Little Chaudière	18	Mar. 1, 1891			125 00	125 00
Covering over portion of Ottawa slides	19	Nov. 10, 1891		2 00		2 00
Site for boathouse, foot of Cathcart Street	20	May 1, 1890		4 00		4 00
Water lots opposite Lot 30, Con. A, Nepean	21	Dec. 1, 1881			200 00	200 00
Three small islands do	22	May 1, 1882			96 00	96 00
Water lot, Calumet	23	July 1, 1891			660 00	660 00
East portion of Hawley's Island	24	June 30, 1881			380 00	380 00
Piece of land, southwest end of Union Bridge.	25	Nov. 12, 1891		75 00		75 00
Small lot of land near Custom House, Quebec	1	July 1, 1890		11 52	1 00	12 52
do for an Office, Rivière du Loup	2	July 1, 1891			7 00	7 00
Roadway from Pier at Coteau Landing.	3	do			50 00	50 00
Reserve on Beach	4	Jan. 1, 1891	400 00			400 00
do	5	do	10 00			10 00
Permission to tap Post Office drain	6	Aug. 1, 1891		10 00		10 00
Lots on North Bay	7	May 1, 1891			193 50	193 50
Use of old log house formerly used as Custom House, Shrewsbury, Ont	8	Sept. 11, 1890		2 00		2 00
Use of old breakwater for storing coal	9	Feb. 5, 1892		5 00		5 00
Lot near town of Alberton, for piling lumber.	10	May 1, 1892			200 00	200 00
Portion of Assay Office, New Westminster	11	June 30, 1881			165 00	165 00
do do	12	do			90 00	90 00
Privilege to erect two Bulk-heads, Rock Bay, Victoria Harbour.	13	June 1, 1892		25 00		25 00
Privilege to build a Wharf opposite his own property, Victoria Harbour	14	do		25 00		25 00
Two Lots of Land for C. P. R. purposes	15	May 12, 1891		50 00		50 00
Right of drainage through Government property, Nanaimo, B.C.	16	Dec. 1, 1891		1 00		1 00
Permission to erect a landing at Little Rapids, Rivière du Lievre	17	May 1, 1892			10 00	10 00
Leave to connect drain to main sewer of Public Buildings	18	May 6, 1892		3 00		3 00
Tract of Land, Chûte de la Grand'Mère, St. Maurice River	19	June 17, 1892		40 00		40 00
			489 16	3,995 52	2,748 34	7,233 02

DR. APPENDIX A.—NO. 32.—HYDRAULIC and other Rents, &c.—

Balances due 1st July, 1890.	Accrued year ended 30th June, 1891.	Total.	Number.	Location.	Name of Proprietors.
$ cts.	$ cts.	$ cts.			LAND SALES—PRINCIPAL ACCOUNT.
12,092 83	....	12,092 83	1	Hamilton and Port Dover Road	Choat & Kern
433 34	....	433 34	2	Bonner's property, Quebec	Timothy Sullivan, now M. Murphy
333 34	....	333 34	3		John Bailey, now Alex. Powell
300 00	....	300 00	4		Abraham Thompson
147 80	....	147 80	5		John Boomer
248 40	....	248 40	6		John Garbatz, now J. C. Nolan
154 80	....	154 80	7		N. H. Bowen
600 00	....	600 00	8		Estate Robert Reid
333 33	....	333 33	9		Jean Chevalier
533 33	....	533 33	10		Daniel Holden
333 33	....	333 33	11		George Creeley
63 00	....	63 00	12		Thomas McAdam
15,573 50	....	15,573 50			
					LAND SALES—INTEREST ACCOUNT.
6,298 25	....	6,298 25	1	Hamilton and Port Dover Road	Choat & Kern (matured)
558 00	....	558 00	2	Bonner's property, Quebec	Timothy Sullivan, now M. Murphy
120 00	....	120 00	3		John Bailey, now Alex. Powell
306 00	....	306 00	4		Abraham Thompson
155 22	....	155 22	5		John Boomer
275 82	....	275 82	6		John Garbatz, now J. C. Nolan
208 95	....	208 95	7		N. H. Bowen
828 00	....	828 00	8		Estate Robert Reid
190 00	....	190 00	9		Jean Chevalier
298 68	....	298 68	10		Daniel Holden
35 91	....	35 91	11		George Creeley
100 00	....	100 00	12		Thomas McAdam
100 00	....	100 00	13		Joseph Brook, tenant
9,474 83	....	9,474 83			

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

Lessees' Accounts, 1890-91—*Concluded.* **Cr.**

Description of Property.	Number.	Date to which the account is made up.	Paid during fiscal year.	Balances due 30th June, 1891.	Total.
			$ cts.	$ cts.	$ cts.
Hamilton and Port Dover Road and Caledonia Bridge	1	....	......	12,092 83	12,092 83
Lot No. 1, Wolfe street	2	....	....	433 34	433 34
do 9, do	3	....	....	333 34	333 34
do 49, do	4	....	....	300 00	300 00
do 73 and 74, Tower street	5	....	....	147 80	147 80
do 64, Wolfe street and 211 and 252, Ware street.	6	....	....	248 40	248 40
do 67 and 68, Monument street	7	....	....	154 80	154 80
do 22 and 23, Wolfe street	8	....	....	600 00	600 00
do 32, Wolfe street	9	....	....	333 33	333 33
do 65 and 66, Wolfe street	10	....	....	533 33	533 33
do 31, Wolfe street	11	....	....	333 33	333 33
do 135, Church street	12	....	....	63 00	63 00
				15,573 50	15,573 50
....	1	June 30, 1874..		6,298 25	6,298 25
Lot No. 1, Wolfe street	2	May 1, 1889..	......	558 00	558 00
do 9, do	3	do	....	120 00	120 00
do 49, do	4	do	....	306 00	306 00
do 73 and 74, Tower street	5	do	....	155 22	155 22
do 64, Wolfe street and 211 and 252, Ware street.	6	do	....	275 82	275 82
do 67 and 68, Monument street	7	do	....	208 95	208 95
do 22 and 23, Wolfe street	8	do	....	828 00	828 00
do 32, Wolfe street	9	Nov. 1, 1863..	....	190 00	190 00
do 65 and 66, Wolfe street	10	do	....	298 68	298 68
do 31, Wolfe street	11	do	....	35 91	35 91
do 135, Church street	12	do	....	100 00	100 00
Monument Hotel	13	do	....	100 00	100 00
				9,474 83	9,474 83

E. MIALL,
Commissioner.

APPENDIX

Dr.

No. 32.—Hydraulic and other Rents, &c.

Balances due on 1st July, 1890.	Rents and Interests accrued up to 30th June, 1891.	Total.	Number.	Location.	Original Lessee.	Present Occupant.
$ cts.	$ cts.	$ cts.				
	200 00	200 00	1	Ottawa River		Perley & Pattee
	100 00	100 00	2	do	Thompson & Perkins	do
	300 00	300 00	3	do	Lyman Perkins	J. R. Booth
	300 00	300 00	4	do	John McKay & Co	R. Blackburn et al
	100 00	100 00	5	do	J. & J. Petrie	Mrs. M. Petrie
	100 00	100 00	6	do	P. H. & L. R. Church	The Chaudière Electric Light Co
	300 00	300 00	7	do		Pierce & Co
	400 00	400 00	8	do	Perley & Pattee	Philip Thompson
	100 00	100 00	9	do	J. M. Currier	N. S. Blaisdell
	900 00	900 00	10	do	Harris, Bronson & Co	The Bronson & Weston Lumber Co
200 00	200 00	400 00	11	do	Levi Young	Pierce & Co
	104 00	104 00	12	do		J. R. Booth
10 00	20 00	30 00	13	do		Bronson & Weston
100 00	100 00	200 00	14	do		do
96 00	96 00	192 00	15	do		Perley & Pattee
8 00	8 00	16 00	16	do	J. M. Coutlee	Mary Conroy
650 00		650 00	17	do		John Rochester
100 00	25 00	125 00	18	do		N. Têtreau
1 00	1 00	2 00	19	do	G. A. Grier & Co	Pierce & Co
4 00		4 00	20	do		Hector Pruneau
200 00		200 00	21	do	Hon. J. Skead	
96 00		96 00	22	do	do	
620 00	40 00	660 00	23	do		D. Carmichael
380 00		380 00	24	do		John Rankin
	75 00	75 00	25	do	J. R. Booth	
9 00	3 52	12 52	1	St. Lawrence River	Quebec Harbour Commission	
6 00	1 00	7 00	2	do	L. T. Piuze	
25 00	25 00	50 00	3	do	Rich. and Ont. Nav. Co	
400 00		400 00	4	Burlington Bay	N. F. Birely	S. K. Birely
10 00		10 00	5	do	J. C. McKeand	
5 00	5 00	10 00	6	Brantford	B. Heyd	
150 50	43 00	193 50	7	Presqu'Isle Har.	Thomas Webb	
1 00	1 00	2 00	8	Rondeau do	School Trustees	
4 00	1 00	5 00	9	Collingwood do	Great North. Transit Co	
180 00	20 00	200 00	10	Fort Francis	S. H. Fowler	Rainy Lake Lumber Co
165 00		165 00	11	British Columbia	A. Peel	
90 00		90 00	12	do	Jonathan Maury	
	25 00	25 00	13	do	Roderick Finlayson	
	25 00	25 00	14	do	Joseph Spratt	
	50 00	50 00	15	do	Corp. New Westminster	
	1 00	1 00	16	do	Bank of British Columbia	
	10 00	10 00	17	Rivière du Lièvre	Dominion Phosphate Co	
2 00	1 00	3 00	18	Charlottetown, P.E.I	Rt.-Rev. Bishop McIntyre	
	40 00	40 00	19	Riv. St. Maurice	The Laurentides Pulp Co. (Limited)	
3,512 50	3,720 52	7,233 02				

A.—*Continued.*

Lessees' Accounts, 1890-91. Cr.

Description of Property.	Number.	Date to which the Account is made up.	Written off by Authority.	Paid during Fiscal Year.	Balances due 30th June, 1891.	Total.
				$ cts.	$ cts.	
Lots B and C, Chaudière Street, service ground	1	July 1, 1891		200 00		200 00
Lot D do do	2	do		100 00		100 00
Lots E, F and G, South Head Street, service ground	3	Jan. 1, 1891		300 00		300 00
Lots H, I and J, Grist Mill, South Head St.	4	do		300 00		300 00
Lot K, Fanning Mill, do	5	do		100 00		100 00
Lot L, service ground, do	6	do		100 00		100 00
Lots Q, R and T, service ground, North Middle Street	7	do		300 00		300 00
Lots M, N, O and P, service ground. No water used	8	July 1, 1891		400 00		400 00
Lot S, service ground	9	Jan. 1, 1891		100 00		100 00
Lots U, V, W, X, Y and Z, service ground	10	July 1, 1891		900 00		900 00
Two strips of land.	11	Jan. 1, 1892		400 00		400 00
Lumber yard, head of slides	12	Sept. 20, 1891		104 00		104 00
Bridge over slides	13	July 1, 1892		30 00		30 00
Strip of land (Amelia Island)	14	Jan. 1, 1892		200 00		200 00
Reserve, head of island	15	do		192 00		192 00
Small island, Duchêne Rapids.	16	Jan. 1, 1891		16 00		16 00
Portion of Lot 39, Con. A, Nepean.	17	Feb. 1, 1885	79 16		570 84	650 00
Excavated channel, slide and two dams, Little Chaudière	18	Mar. 1, 1891			125 00	125 00
Covering over portion of Ottawa slides	19	Nov. 10, 1891		2 00		2 00
Site for boathouse, foot of Cathcart Street	20	May 1, 1890		4 00		4 00
Water lots opposite Lot 30, Con. A, Nepean	21	Dec. 1, 1881			200 00	200 00
Three small islands do	22	May 1, 1882			96 00	96 00
Water lot, Calumet	23	July 1, 1891			660 00	660 00
East portion of Hawley's Island	24	June 30, 1881			380 00	380 00
Piece of land, southwest end of Union Bridge.	25	Nov. 12, 1891		75 00		75 00
Small lot of land near Custom House, Quebec	1	July 1, 1890		11 52	1 00	12 52
do for an Office, Rivière du Loup	2	July 1, 1891			7 00	7 00
Roadway from Pier at Coteau Landing.	3	do			50 00	50 00
Reserve on Beach	4	Jan. 1, 1891	400 00			400 00
do	5	do	10 00			10 00
Permission to tap Post Office drain	6	Aug. 1, 1891		10 00		10 00
Lots on North Bay	7	May 1, 1891			193 50	193 50
Use of old log house formerly used as Custom House, Shrewsbury, Ont	8	Sept. 11, 1890		2 00		2 00
Use of old breakwater for storing coal	9	Feb. 5, 1892		5 00		5 00
Lot near town of Alberton, for piling lumber.	10	May 1, 1892			200 00	200 00
Portion of Assay Office, New Westminster	11	June 30, 1881			165 00	165 00
do do	12	do			90 00	90 00
Privilege to erect two Bulk-heads, Rock Bay, Victoria Harbour.	13	June 1, 1892		25 00		25 00
Privilege to build a Wharf opposite his own property, Victoria Harbour	14	do		25 00		25 00
Two Lots of Land for C. P. R. purposes	15	May 12, 1891		50 00		50 00
Right of drainage through Government property, Nanaimo, B.C	16	Dec. 1, 1891		1 00		1 00
Permission to erect a landing at Little Rapids, Rivière du Lievre	17	May 1, 1892			10 00	10 00
Leave to connect drain to main sewer of Public Buildings	18	May 6, 1892		3 00		3 00
Tract of Land, Chûte de la Grand'Mère, St. Maurice River	19	June 17, 1892		40 00		40 00
			489 16	3,995 52	2,748 34	7,233 02

APPENDIX

Dr.

No. 32.—Hydraulic and other Rents, &c.

Balances due on 1st July, 1890.	Rents and Interests accrued up to 30th June, 1891.	Total.	Number.	Location.	Original Lessee.	Present Occupant.
$ cts.	$ cts.	$ cts.				
....	200 00	200 00	1	Ottawa River	....	Perley & Pattee
....	100 00	100 00	2	do	Thompson & Perkins	do
....	300 00	300 00	3	do	Lyman Perkins	J. R. Booth
....	300 00	300 00	4	do	John McKay & Co	R. Blackburn et al
....	100 00	100 00	5	do	J. & J. Petrie	Mrs. M. Petrie
....	100 00	100 00	6	do	P. H. & L. R. Church	The Chaudière Electric Light Co
....	300 00	300 00	7	do	....	Pierce & Co
....	400 00	400 00	8	do	Perley & Pattee	Philip Thompson
....	100 00	100 00	9	do	J. M. Currier	N. S. Blaisdell
....	900 00	900 00	10	do	Harris, Bronson & Co	The Bronson & Weston Lumber Co
200 00	200 00	400 00	11	do	Levi Young	Pierce & Co
....	104 00	104 00	12	do	....	J. R. Booth
10 00	20 00	30 00	13	do	....	Bronson & Weston
100 00	100 00	200 00	14	do	....	do
96 00	96 00	192 00	15	do	....	Perley & Pattee
8 00	8 00	16 00	16	do	J. M. Coutlee	Mary Conroy
650 00	....	650 00	17	do	....	John Rochester
100 00	25 00	125 00	18	do	....	N. Têtreau
1 00	1 00	2 00	19	do	G. A. Grier & Co	Pierce & Co
4 00	....	4 00	20	do	....	Hector Pruneau
200 00	....	200 00	21	do	Hon. J. Skead	....
96 00	....	96 00	22	do	do	....
620 00	40 00	660 00	23	do	....	D. Carmichael
380 00	....	380 00	24	do	....	John Rankin
....	75 00	75 00	25	do	J. R. Booth	....
9 00	3 52	12 52	1	St. Lawrence River	Quebec Harbour Commission	....
6 00	1 00	7 00	2	do	L. T. Piuze	....
25 00	25 00	50 00	3	do	Rich. and Ont. Nav. Co.	....
400 00	....	400 00	4	Burlington Bay.	N. F. Birely	S. K. Birely
10 00	....	10 00	5	do	J. C. McKeand	....
5 00	5 00	10 00	6	Brantford	B. Heyd	....
150 50	43 00	193 50	7	Presqu'Isle Har.	Thomas Webb	....
1 00	1 00	2 00	8	Rondeau do	School Trustees	....
4 00	1 00	5 00	9	Collingwood do	Great North. Transit Co.	....
180 00	20 00	200 00	10	Fort Francis	S. H. Fowler	Rainy Lake Lumber Co
165 00	....	165 00	11	British Columbia	A. Peel	....
90 00	....	90 00	12	do	Jonathan Maury	....
....	25 00	25 00	13	do	Roderick Finlayson	....
....	25 00	25 00	14	do	Joseph Spratt	....
....	50 00	50 00	15	do	Corp. New Westminster.	....
....	1 00	1 00	16	do	Bank of British Columbia	....
....	10 00	10 00	17	Rivière du Lièvre	Dominion Phosphate Co.	....
2 00	1 00	3 00	18	Charlottetown, P.E.I	Rt.-Rev. Bishop McIntyre	....
....	40 00	40 00	19	Riv. St. Maurice	The Laurentides Pulp Co. (Limited)	....
3,512 50	3,720 52	7,233 02				

A.—*Continued.*

Lessees' Accounts, 1890-91. Cr.

Description of Property.	Number.	Date to which the Account is made up.	Written off by Authority.	Paid during Fiscal Year.	Balances due 30th June, 1891.	Total.
				$ cts.	$ cts.	
Lots B and C, Chaudière Street, service ground	1	July 1, 1891		200 00		200 00
Lot D do do	2	do		100 00		100 00
Lots E, F and G, South Head Street, service ground	3	Jan. 1, 1891		300 00		300 00
Lots H, I and J, Grist Mill, South Head St.	4	do		300 00		300 00
Lot K, Fanning Mill, do	5	do		100 00		100 00
Lot L, service ground, do	6	do		100 00		100 00
Lots Q, R and T, service ground, North Middle Street	7	do		300 00		300 00
Lots M, N, O and P, service ground. No water used	8	July 1, 1891		400 00		400 00
Lot S, service ground	9	Jan. 1, 1891		100 00		100 00
Lots U, V, W, X, Y and Z, service ground	10	July 1, 1891		900 00		900 00
Two strips of land.	11	Jan. 1, 1892		400 00		400 00
Lumber yard, head of slides	12	Sept. 20, 1891		104 00		104 00
Bridge over slides	13	July 1, 1892		30 00		30 00
Strip of land (Amelia Island)	14	Jan. 1, 1892		200 00		200 00
Reserve, head of island	15	do		192 00		192 00
Small island, Duchêne Rapids.	16	Jan. 1, 1891		16 00		16 00
Portion of Lot 39, Con. A, Nepean.	17	Feb. 1, 1885	79 16		570 84	650 00
Excavated channel, slide and two dams, Little Chaudière	18	Mar. 1, 1891			125 00	125 00
Covering over portion of Ottawa slides	19	Nov. 10, 1891		2 00		2 00
Site for boathouse, foot of Cathcart Street	20	May 1, 1890		4 00		4 00
Water lots opposite Lot 30, Con. A, Nepean	21	Dec. 1, 1881			200 00	200 00
Three small islands do	22	May 1, 1882			96 00	96 00
Water lot, Calumet	23	July 1, 1891			660 00	660 00
East portion of Hawley's Island	24	June 30, 1881			380 00	380 00
Piece of land, southwest end of Union Bridge.	25	Nov. 12, 1891		75 00		75 00
Small lot of land near Custom House, Quebec	1	July 1, 1890		11 52	1 00	12 52
do for an Office, Rivière du Loup	2	July 1, 1891			7 00	7 00
Roadway from Pier at Coteau Landing.	3	do			50 00	50 00
Reserve on Beach	4	Jan. 1, 1891	400 00			400 00
do	5	do	10 00			10 00
Permission to tap Post Office drain	6	Aug. 1, 1891		10 00		10 00
Lots on North Bay	7	May 1, 1891			193 50	193 50
Use of old log house formerly used as Custom House, Shrewsbury, Ont	8	Sept. 11, 1890		2 00		2 00
Use of old breakwater for storing coal	9	Feb. 5, 1892		5 00		5 00
Lot near town of Alberton, for piling lumber.	10	May 1, 1892			200 00	200 00
Portion of Assay Office, New Westminster	11	June 30, 1881			165 00	165 00
do do	12	do			90 00	90 00
Privilege to erect two Bulk-heads, Rock Bay, Victoria Harbour	13	June 1, 1892		25 00		25 00
Privilege to build a Wharf opposite his own property, Victoria Harbour	14	do		25 00		25 00
Two Lots of Land for C. P. R. purposes	15	May 12, 1891		50 00		50 00
Right of drainage through Government perty, Nanaimo, B.C		1891		1 00		1 00
Permission to erect a landing at Little Rivière du Lievre		2			10 00	10 00
Leave to connect drain to main sewer o Buildings				3 00		3 00
Tract of Land, Chûte de la Grand'M Maurice River				40 00		40 00
				3,995 52	2,748 34	7,233 02

DR. APPENDIX A.—NO. 32.—HYDRAULIC and other Rents, &c.—

Balances due 1st July, 1890.	Accrued year ended 30th June, 1891.	Total.	Number.	Location.	Name of Proprietors.
$ cts.	$ cts.	$ cts.			LAND SALES—PRINCIPAL ACCOUNT.
12,092 83	....	12,092 83	1	Hamilton and Port Dover Road...........	Choat & Kern....................
433 34	....	433 34	2	Bonner's property, Quebec	Timothy Sullivan, now M. Murphy....
333 34	....	333 34	3	....	John Bailey, now Alex. Powell.......
300 00	....	300 00	4	....	Abraham Thompson ....
147 80	....	147 80	5	....	John Boomer.....................
248 40	....	248 40	6	....	John Garbatz, now J. C. Nolan.......
154 80	....	154 80	7	....	N. H. Bowen.....................
600 00	....	600 00	8	....	Estate Robert Reid................
333 33	....	333 33	9	....	Jean Chevalier....................
533 33	....	533 33	10	....	Daniel Holden.....................
333 33	....	333 33	11	....	George Creeley....................
63 00	....	63 00	12	....	Thomas McAdam....................
15,573 50	....	15,573 50			
					LAND SALES—INTEREST ACCOUNT.
6,298 25	....	6,298 25	1	Hamilton and Port Dover Road.......	Choat & Kern (matured)............
558 00	....	558 00	2	Bonner's property, Quebec	Timothy Sullivan, now M. Murphy....
120 00	....	120 00	3	....	John Bailey, now Alex. Powell........
306 00	....	306 00	4	....	Abraham Thompson..............
155 22	....	155 22	5	....	John Boomer.....................
275 82	....	275 82	6	....	John Garbatz, now J. C. Nolan......
208 95	....	208 95	7	....	N. H. Bowen......................
828 00	....	828 00	8	....	Estate Robert Reid.................
190 00	....	190 00	9	....	Jean Chevalier....................
298 68	....	298 68	10	....	Daniel Holden.....................
35 91	....	35 91	11	....	George Creeley....................
100 00	....	100 00	12	....	Thomas McAdam..................
100 00	....	100 00	13	....	Joseph Brook, tenant...............
9,474 83	....	9,474 83			

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

Lessees' Accounts, 1890-91—*Concluded.* Cr.

Description of Property.	Number.	Date to which the account is made up.	Paid during fiscal year.	Balances due 30th June, 1891.	Total.
			$ cts.	$ cts.	$ cts.
Hamilton and Port Dover Road and Caledonia Bridge	1			12,092 83	12,092 83
Lot No. 1, Wolfe street	2			433 34	433 34
do 9, do	3			333 34	333 34
do 49, do	4			300 00	300 00
do 73 and 74, Tower street	5			147 80	147 80
do 64, Wolfe street and 211 and 252, Ware street.	6			248 40	248 40
do 67 and 68, Monument street	7			154 80	154 80
do 22 and 23, Wolfe street	8			600 00	600 00
do 32, Wolfe street	9			333 33	333 33
do 65 and 66, Wolfe street	10			533 33	533 33
do 31, Wolfe street	11			333 33	333 33
do 135, Church street	12			63 00	63 00
				15,573 50	15,573 50
	1	June 30, 1874		6,298 25	6,298 25
Lot No. 1, Wolfe street	2	May 1, 1889		558 00	558 00
do 9, do	3	do		120 00	120 00
do 49, do	4	do		306 00	306 00
do 73 and 74, Tower street	5	do		155 22	155 22
do 64, Wolfe street and 211 and 252, Ware street.	6	do		275 82	275 82
do 67 and 68, Monument street	7	do		208 95	208 95
do 22 and 23, Wolfe street	8	do		828 00	828 00
do 32, Wolfe street	9	Nov. 1, 1863		190 00	190 00
do 65 and 66, Wolfe street	10	do		298 68	298 68
do 31, Wolfe street	11	do		35 91	35 91
do 135, Church street	12	do		100 00	100 00
Monument Hotel	13	do		100 00	100 00
				9,474 83	9,474 83

E. MIALL,
Commissioner.

APPENDIX B.

No. 1.—Details of Excise Expenditure, for the Year ended 30th June, 1891.

To whom Paid.	Service.	Deduction for Superannuation.	Amount Paid.	Total Amount Paid.
	Belleville.	$ cts.	$ cts.	$ cts.
McAnany, A.	Salary as Collector for the year	31 96	1,768 04	
Pope, C. W	do Deputy Collector for the year.	24 00	1,176 00	
Craig, J.	do Special Class Exciseman, 1st July to 30th Sept	6 90	342 90	
Bell, P	do 1st Class Exciseman for the year	18 16	885 72	
McCoy, Wm.	do 1st do do	16 72	821 40	
McCaig, A. F.	do Deputy Collector do	4 96	335 04	
Spelman, J. J	do Special Class Exciseman, 1st Oct. to 30th June	20 97	1,028 97	
	Salaries	125 63	6,218 16	
	Contingencies		827 61	
				7,045 77
	Brantford.			
Spence, John	Salary as Collector for the year	30 76	1,569 24	
Hawkins, W. L.	do Accountant, from 1st July to 30th Sept	6 00	294 00	
Fraser, Geo. J.	do Deputy Collector for the year.	19 96	980 04	
Hart, P. D.	do 2nd Class Exciseman do	16 96	833 04	
Jutonville, J. P.	do 2nd do 1st July to 31st March	11 25	554 04	
Webster, Thos.	do 3rd do July	1 25	61 25	
Lyons, Ed	do 3rd do for the year	13 20	646 80	
Murray, D	do 3rd do from 1st July to 30th April	8 56	466 42	
Henwood, Geo	do 2nd do from 1st Nov to 30th June	11 32	557 84	
Hawkins, A. C	do Probationary Exciseman, 13th Feb. to 30th June	2 37	188 07	
Simon, E. H	do 1st Class Exciseman, 1st April to 25th May; Deputy Collector, from 26th May to 30th June	4 65	229 14	
Dodds, E. W	do 3rd Class Exciseman, 1st May to 30th June	2 40	117 60	
	Salaries	128 68	6,437 48	
	Contingencies		699 90	
				7,137 38
	Cornwall.			
Mulhern, M. M.	Salary as Collector for the year	14 00	686 00	
	Contingencies		85 00	
				771 00
	Guelph.			
Powell, J. B	Salary as Collector for the year	33 60	1,646 40	
Bouteiller, G. A.	do Special Class Exciseman for the year	28 04	1,371 96	
Till, T. M.	do Deputy Collector do	25 20	1,234 80	
Woodward, G. W.	do Special Class Exciseman do	24 00	1,176 00	
Campbell, J. McD.	do do 1st July to 30th May	22 00	1,078 00	
Lynes, K	do 1st Class Exciseman, 1st July to 25th May; Special Class, 26th May to 30th June	20 32	999 53	
Broadfoot, S.	do Accountant for the year	19 96	980 04	

Appendix B.—No. 1.—Details of Excise Expenditure, 1891—*Continued.*

To whom Paid.	Service.	Deduction for Superannuation.	Amount Paid.	Total Amount Paid.
	Guelph—Concluded.	$ cts.	$ cts.	$ cts.
Erb, A. A	Salary as 3rd Class Exciseman for the year	15 00	735 00	
Howie, A	do 3rd do do	15 00	735 00	
Robson, Jas	do 3rd do 1st July to 31st August	2 50	122 50	
Gow, J. E	do 3rd do 1st July to 31st Dec.; 2nd Class, 1st Jan. to 30th June	13 80	676 20	
Macintire, D	do Probationary Exciseman, 1st July to 10th Aug.: 3rd Class, 11th Aug. to 31st Dec.; 2nd Class, 1st Jan. to 30th June	12 87	651 36	
Davis, Jas	do 3rd Class Exciseman, 1st July to 31st Dec.; 2nd Class, 1st Jan. to 30th June	11 68	635 33	
Bowman, Allan	do 3rd Class Exciseman, 8th Oct. to 30th June	5 90	384 42	
	Salaries	249 87	12,426 54	
	Contingencies		1,223 66	
				13,650 20
	Hamilton.			
Miller, W. F	Salary as Collector for the year	34 72	1,700 28	
Ross, S. F	do Dep. Collector do	25 96	1,274 04	
McPherson, A. F	do Accountant do	28 04	1,371 96	
Donaghy, Wm	do Special Class Exciseman for the year	28 04	1,371 96	
Greey, S	do Special Class Exciseman do	24 00	1,176 00	
Baby, W. A. D	do do 1st July to 30th Dec.	12 00	588 00	
Iler, B	do do for the year	24 00	1,176 00	
O'Brien, J. F	do 1st Class Exciseman for the year	18 03	885 72	
Crawford, W. P	do 2nd do do	16 96	833 04	
Egener, A	do 2nd do do	16 96	833 04	
Hobbs, G. N	do 2nd do do	16 96	833 04	
Courtney, J. J	do 2nd do do	16 96	833 04	
Logan, J	do 2nd do do	16 85	824 40	
Amor, W	do 2nd do do	16 49	809 76	
Mackay, G. W	do 3rd do do	15 00	735 00	
Dumbrille, R. W	do 3rd do do	15 00	735 00	
Irwin, Robt	do 3rd do do	14 10	690 90	
Allan, G. A	do 2nd do 1st Feb. to 30th June	6 25	306 25	
Beasley, R. S	do Messenger for the year	3 72	296 28	
	Salaries	350 04	17,273 71	
	Contingencies		479 53	
				17,753 24
	Kingston.			
Rowland, F	Salary as Collector for the year	31 96	1,568 04	
Grimason, T	do Dep. Collector do	22 04	1,077 96	
Dickson, C. T	do Accountant do	24 00	1,176 00	
Hanley, A	do Asst. Accountant for the year	17 84	872 16	
Browne, G. W	do 2nd Class Exciseman do	16 96	833 04	
Fahey, Ed	do 3rd do do	7 96	392 04	
O'Donnell, J	do 3rd do do	14 10	690 90	

APPENDIX A—*Continued.*

No. 29.—STATEMENT of Lumber Measured, Culled and Counted, through the Office of the Supervisor of Cullers at the Port of Quebec during the Year ended 30th June, 1891.

Pieces.	Description of Timber.	Measured, Culled or Counted.	Tons Standard.	Rate.			Office Fees.	Cullers' Fees.	Total Amount Accrued.
				Office Fee.	Cullers' Fee.	Total Fees.			
			Tons. Pts.	Cts.	Cts.	Cts.	$ cts.	$ cts.	$ cts.
83,714	Waney White pine	Stringed	125,896 12						
4,708	" Ash	"	3,850 11						
90	" Oak	"	172 21						
1	" Elm	"	2 10						
7	" Tamarac	"	7 18						
100	" Butternut	"	53 32						
1,293	" Birch	"	980 18						
541	" Maple	"	616 38						
1	" Spruce	"	0 08						
411	" Whitewood	"	503 05						
51	" Red Pine	"	106 06						
88	" Chestnut	"	86 22						
22	" Sycamore	"	22 38						
1	" Balm of Gilead	"	0 38						
142	" Hickory	"	78 05						
182	" Walnut	"	108 14						
273	" Cherry	"	118 35						
			132,605 11	0 3$\frac{5}{10}$	0 04	0 7$\frac{5}{10}$	4,641 18	5,304 20	9,945 38
79,817	White Pine	Measured	91,899 17						
3	Basswood	"	3 01						
1	Butternut	"	0 17						
			91,902 35	0 01	0 04	0 05	919 06	3,676 08	4,595 14
8,741	Red Pine	"	8,275 32						
19,276	Oak	"	32,272 12						
16,320	Elm	"	19,733 26						
253	Ash	"	178 09						

225	Tamarac	"	178 35						
10,328	Birch	"	3,938 31						
26	Maple	"	15 03						
2	Balm of Gilead	"	2 04						
51	Spruce	"	16 36						
11	Whitewood	"	14 02						
412	Hickory	"	416 35						
4	Walnut	"	5 04						
			65,047 29	0 $2\frac{6}{10}$	0 04	0 $6\frac{6}{10}$	1,691 26	2,601 88	4,293 14
	Longitudinals		1,802,200 Sup. ft			0 05		90 11	90 11
18,215	Standard Staves	Culled	18·0·3·11 Per m.			3 50	12 74	50 55	63 29
9,259	West India do	"	7·7·0·19 "			1 30	2 48	10 02	12 50
							7,266 72	11,732 84	18,999 56
	Deduct for fractions						0 12		0 12
							7,266 60	11,732 84	18,999 44

E. MIALL,
Commissioner.

Inland Revenue Department,
Ottawa, 17th August, 1891.

APPENDIX A—*Continued.*

No. 30.—STATEMENT of Lumber Measured, Culled and Counted, at the Ports of Montreal, Lachine and Sorel, for the Year ended 30th June, 1891.

Pieces.	Description of Timber.	Measured, Culled or Counted.	Tons, Standard.	Rate.	Office Fees.	Cullers' Fees	Total Amount Accrued.
			Tons. Pts.	Cts.	$ cts.	$ cts.	$ cts.
6,339	Square Pine	Measured	3,610 30				
3,230	Flat do	do	2,153 30				
480	Round do	do	309 33				
			6,074 13	5			303 71
999	Flat Tamarac	do	783 04				
2,898	Cedars	do	1,985 05				
3,430	Round Pine	do	2,828 23				
1,561	Flat do	do	1,182 22				
			6,779 14	80			216 94
548	Waney Pine		543 37	$6\frac{2}{10}$			33 72
1,283	do (stringed)	do	1,053 09	$7\frac{5}{10}$			78 99
3,816	Flat Tamarac	do	2,118 14				
30	Square Elm	do	39 18				
86	do Oak	do	153 02				
			2,310 34	$6\frac{6}{10}$			152 52
8,192	Square Hemlock	do	5,101 09				
2,432	Flat do	do	1,497 00				
5,896	Round do	do	4,537 22				
41,220			11,135 31	$3\frac{5}{10}$			389 75
							1,175 63

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

E. MIALL,
Commissioner.

APPENDIX A—*Continued.*

No. 31.—Statement of Lumber Measured, Culled and Counted, at the Port of Three Rivers, for the Year ended 30th June, 1891.

Pieces.	Description of Timber.	Measured Culled or Counted.	Tons, Standard.	Rate.	Office Fees.	Cullers' Fees	Total Amount Accrued.
			Tons. Pts.	Cts.	$ cts.	$ cts.	$ cts.
68	Square Birch	Measured and culled	22 00	$12\frac{2}{10}$	1 80	0 88	2 68

E. MIALL,
Commissioner.

Inland Revenue Department,
Ottawa, 17th August, 1891.

APPENDIX

DR.

No. 32.—HYDRAULIC and other Rents, &c.

Balances due on 1st July, 1890.	Rents and Interests accrued up to 30th June, 1891.	Total.	Number.	Location.	Original Lessee.	Present Occupant.
$ cts.	$ cts.	$ cts.				
....	200 00	200 00	1	Ottawa River...	....	Perley & Pattee.......
....	100 00	100 00	2	do ..	Thompson & Perkins ..	do ..
....	300 00	300 00	3	do ..	Lyman Perkins..	J. R. Booth...........
....	300 00	300 00	4	do ..	John McKay & Co.....	R. Blackburn et al...
....	100 00	100 00	5	do ..	J. & J. Petrie.........	Mrs. M. Petrie.. ..
....	100 00	100 00	6	do ..	P. H. & L. R. Church...	The Chaudière Electric Light Co........
....	300 00	300 00	7	do ..	....	Pierce & Co........ ..
....	400 00	400 00	8	do ..	Perley & Pattee.........	Philip Thompson.... .
....	100 00	100 00	9	do ..	J. M. Currier..........	N. S. Blaisdell.. ....
....	900 00	900 00	10	do ..	Harris, Bronson & Co....	The Bronson & Weston Lumber Co... ..
200 00	200 00	400 00	11	do ..	Levi Young.	Pierce & Co..........
....	104 00	104 00	12	do ..	....	J. R. Booth..... ....
10 00	20 00	30 00	13	do ..	....	Bronson & Weston....
100 00	100 00	200 00	14	do ..	....	do ....
96 00	96 00	192 00	15	do ..	....	Perley & Pattee.....
8 00	8 00	16 00	16	do ..	J. M. Coutlee.......	Mary Conroy..........
650 00	....	650 00	17	do ..	....	John Rochester.. .....
100 00	25 00	125 00	18	do ..	....	N. Têtreau..... ....
1 00	1 00	2 00	19	do ..	G. A. Grier & Co.. . .	Pierce & Co. . .....
4 00	....	4 00	20	do ..	....	Hector Pruneau. .....
200 00	....	200 00	21	do ..	Hon. J. Skead......	....
96 00	......	96 00	22	do ..	do	....
620 00	40 00	660 00	23	do ..	....	D. Carmichael.........
380 00	....	380 00	24	do .	....	John Rankin.........
....	75 00	75 00	25	do ..	J. R. Booth.	....
9 00	3 52	12 52	1	St. Lawrence River.........	Quebec Harbour Commission............	....
6 00	1 00	7 00	2	do ..	L. T. Piuze	....
25 00	25 00	50 00	3	do ..	Rich. and Ont. Nav. Co.	....
400 00	....	400 00	4	Burlington Bay.	N. F. Birely....	S. K. Birely ... .
10 00	....	10 00	5	do ..	J. C. McKeand.......	....
5 00	5 00	10 00	6	Brantford .	B. Heyd	....
150 50	43 00	193 50	7	Presqu'Isle Har.	Thomas Webb	....
1 00	1 00	2 00	8	Rondeau do	School Trustees..........	....
4 00	1 00	5 00	9	Collingwood do	Great North. Transit Co.	....
180 00	20 00	200 00	10	Fort Francis....	S. H. Fowler.	Rainy Lake Lumber Co.... ....
165 00	....	165 00	11	British Columbia	A. Peel	....
90 00	....	90 00	12	do ..	Jonathan Maury........	....
....	25 00	25 00	13	do ..	Roderick Finlayson.....	....
....	25 00	25 00	14	do ..	Joseph Spratt..........	....
....	50 00	50 00	15	do ..	Corp. New Westminster.	....
....	1 00	1 00	16	do ..	Bank of British Columbia	....
......	10 00	10 00	17	Rivière du Lièvre	Dominion Phosphate Co.	....
2 00	1 00	3 00	18	Charlottetown, P.E.I	Rt.-Rev. Bishop McIntyre	....
....	40 00	40 00	19	Riv. St. Maurice	The Laurentides Pulp Co. (Limited)	....
3,512 50	3,720 52	7,233 02				

A.—*Continued.*

Lessees' Accounts, 1890-91. **Cr.**

Description of Property.	Number.	Date to which the Account is made up.	Written off by Authority.	Paid during Fiscal Year.	Balances due 30th June, 1891.	Total.
				$ cts.	$ cts.	
Lots B and C, Chaudière Street, service ground	1	July 1, 1891	.....	200 00	....	200 00
Lot D do do ..	2	do	.....	100 00	....	100 00
Lots E, F and G, South Head Street, service ground	3	Jan. 1, 1891	.....	300 00	....	300 00
Lots H, I and J, Grist Mill, South Head St..	4	do	.....	300 00	....	300 00
Lot K, Fanning Mill, do ..	5	do	.....	100 00	....	100 00
Lot L, service ground, do ..	6	do	.....	100 00	....	100 00
Lots Q, R and T, service ground, North Middle Street	7	do	.....	300 00	....	300 00
Lots M, N, O and P, service ground. No water used	8	July 1, 1891	.....	400 00	....	400 00
Lot S, service ground........	9	Jan. 1, 1891	.....	100 00	....	100 00
Lots U, V, W, X, Y and Z, service ground ..	10	July 1, 1891	.....	900 00	....	900 00
Two strips of land........	11	Jan. 1, 1892	.....	400 00	....	400 00
Lumber yard, head of slides........	12	Sept. 20, 1891	.....	104 00	....	104 00
Bridge over slides........	13	July 1, 1892	.....	30 00	....	30 00
Strip of land (Amelia Island)	14	Jan. 1, 1892	.....	200 00	....	200 00
Reserve, head of island	15	do	.....	192 00	....	192 00
Small island, Duchêne Rapids........	16	Jan. 1, 1891	.....	16 00	....	16 00
Portion of Lot 39, Con. A, Nepean........	17	Feb. 1, 1885	79 16	....	570 84	650 00
Excavated channel, slide and two dams, Little Chaudière	18	Mar. 1, 1891	.....	....	125 00	125 00
Covering over portion of Ottawa slides........	19	Nov. 10, 1891	.....	2 00	....	2 00
Site for boathouse, foot of Cathcart Street....	20	May 1, 1890	.....	4 00	....	4 00
Water lots opposite Lot 30, Con. A, Nepean..	21	Dec. 1, 1881	.....	....	200 00	200 00
Three small islands do ..	22	May 1, 1882	.....	....	96 00	96 00
Water lot, Calumet	23	July 1, 1891	.....	....	660 00	660 00
East portion of Hawley's Island........	24	June 30, 1881	.....	....	380 00	380 00
Piece of land, southwest end of Union Bridge.	25	Nov. 12, 1891	.....	75 00	....	75 00
Small lot of land near Custom House, Quebec	1	July 1, 1890	.....	11 52	1 00	12 52
do for an Office, Rivière du Loup	2	July 1, 1891	.....	....	7 00	7 00
Roadway from Pier at Coteau Landing.	3	do	.....	....	50 00	50 00
Reserve on Beach........	4	Jan. 1, 1891	400 00	....	....	400 00
do	5	do	10 00	....	....	10 00
Permission to tap Post Office drain........	6	Aug. 1, 1891	.....	10 00	....	10 00
Lots on North Bay........	7	May 1, 1891	.....	....	193 50	193 50
Use of old log house formerly used as Custom House, Shrewsbury, Ont	8	Sept. 11, 1890	.....	2 00	....	2 00
Use of old breakwater for storing coal........	9	Feb. 5, 1892	.....	5 00	....	5 00
Lot near town of Alberton, for piling lumber.	10	May 1, 1892	.....	....	200 00	200 00
Portion of Assay Office, New Westminster....	11	June 30, 1881	.....	....	165 00	165 00
do do ...	12	do	.....	....	90 00	90 00
Privilege to erect two Bulk-heads, Rock Bay, Victoria Harbour........	13	June 1, 1892	.....	25 00	....	25 00
Privilege to build a Wharf opposite his own property, Victoria Harbour........	14	do	.....	25 00	....	25 00
Two Lots of Land for C. P. R. purposes........	15	May 12, 1891	.....	50 00	....	50 00
Right of drainage through Government property, Nanaimo, B.C........	16	Dec. 1, 1891	.....	1 00	....	1 00
Permission to erect a landing at Little Rapids, Rivière du Lievre........	17	May 1, 1892	.....	....	10 00	10 00
Leave to connect drain to main sewer of Public Buildings	18	May 6, 1892	.....	3 00	....	3 00
Tract of Land, Chûte de la Grand'Mère, St. Maurice River	19	June 17, 1892	.....	40 00	....	40 00
			489 16	3,995 52	2,748 34	7,233 02

Dr. Appendix A.—No. 32.—Hydraulic and other Rents, &c.—

Balances due 1st July, 1890.	Accrued year ended 30th June, 1891.	Total.	Number.	Location.	Name of Proprietors.
$ cts.	$ cts.	$ cts.			LAND SALES—PRINCIPAL ACCOUNT.
12,092 83	.. ..	12,092 83	1	Hamilton and Port Dover Road...........	Choat & Kern ....
433 34	....	433 34	2	Bonner's property, Quebec	Timothy Sullivan, now M. Murphy....
333 34	....	333 34	3	....	John Bailey, now Alex. Powell.......
300 00	... .	300 00	4	....	Abraham Thompson ... .
147 80	....	147 80	5	....	John Boomer..... ... .
248 40	....	248 40	6	....	John Garbatz, now J. C. Nolan.......
154 80	....	154 80	7	....	N. H. Bowen...... ....
600 00	....	600 00	8	....	Estate Robert Reid...... .. ..
333 33	....	333 33	9	....	Jean Chevalier......................
533 33	....	533 33	10	....	Daniel Holden.......................
333 33	....	333 33	11	....	George Creeley ....
63 00	....	63 00	12	....	Thomas McAdam...................
15,573 50	....	15,573 50			
					LAND SALES—INTEREST ACCOUNT.
6,298 25	....	6,298 25	1	Hamilton and Port Dover Road.......	Choat & Kern (matured) .. ..
558 00	....	558 00	2	Bonner's property, Quebec	Timothy Sullivan, now M. Murphy....
120 00	....	120 00	3	....	John Bailey, now Alex. Powell........
306 00	....	306 00	4	....	Abraham Thompson ....
155 22	....	155 22	5	....	John Boomer.... .. ..
275 82	....	275 82	6	....	John Garbatz, now J. C. Nolan.... ...
208 95	....	208 95	7	....	N. H. Bowen......... ....
828 00	....	828 00	8	....	Estate Robert Reid................
190 00	....	190 00	9	....	Jean Chevalier.. ....
298 68	....	298 68	10	....	Daniel Holden.. ....
35 91	....	35 91	11	....	George Creeley .. ..
100 00	....	100 00	12	....	Thomas McAdam..................
100 00	....	100 00	13	....	Joseph Brook, tenant ....
9,474 83	....	9,474 83			

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

Lessees' Accounts, 1890-91—*Concluded.* Cr.

Description of Property.	Number.	Date to which the account is made up.	Paid during fiscal year.	Balances due 30th June, 1891.	Total.
			$ cts.	$ cts.	$ cts.
Hamilton and Port Dover Road and Caledonia Bridge	1			12,092 83	12,092 83
Lot No. 1, Wolfe street	2			433 34	433 34
do 9, do	3			333 34	333 34
do 49, do	4			300 00	300 00
do 73 and 74, Tower street	5			147 80	147 80
do 64, Wolfe street and 211 and 252, Ware street.	6			248 40	248 40
do 67 and 68, Monument street	7			154 80	154 80
do 22 and 23, Wolfe street	8			600 00	600 00
do 32, Wolfe street	9			333 33	333 33
do 65 and 66, Wolfe street	10			533 33	533 33
do 31, Wolfe street	11			333 33	333 33
do 135, Church street	12			63 00	63 00
				15,573 50	15,573 50
	1	June 30, 1874		6,298 25	6,298 25
Lot No. 1, Wolfe street	2	May 1, 1889		558 00	558 00
do 9, do	3	do		120 00	120 00
do 49, do	4	do		306 00	306 00
do 73 and 74, Tower street	5	do		155 22	155 22
do 64, Wolfe street and 211 and 252, Ware street.	6	do		275 82	275 82
do 67 and 68, Monument street	7	do		208 95	208 95
do 22 and 23, Wolfe street	8	do		828 00	828 00
do 32, Wolfe street	9	Nov. 1, 1863		190 00	190 00
do 65 and 66, Wolfe street	10	do		298 68	298 68
do 31, Wolfe street	11	do		35 91	35 91
do 135, Church street	12	do		100 00	100 00
Monument Hotel	13	do		100 00	100 00
				9,474 83	9,474 83

E. MIALL,
Commissioner.

APPENDIX B.

No. 1.—Details of Excise Expenditure, for the Year ended 30th June, 1891.

To whom Paid.	Service.	Deduction for Superannuation.	Amount Paid.	Total Amount Paid.
	Belleville.	$ cts.	$ cts.	$ cts.
McAllister, A.	Salary as Collector for the year	31 96	1,568 04	
Pole, C. W.	do Deputy Collector for the year.	24 00	1,176 00	
Craig, J.	do Special Class Exciseman, 1st July to 30th Sept	6 99	342 99	
Bish, P	do 1st Class Exciseman for the year	18 03	885 72	
McCoy, Wm.	do 1st do do	16 72	821 40	
McCuaig, A. F	do Deputy Collector do	4 96	395 04	
Spereman, J. J	do Special Class Exciseman, 1st Oct. to 30th June	20 97	1,028 97	
	Salaries	123 63	6,218 16	
	Contingencies		827 61	
				7,045 77
	Brantford.			
Spence, John	Salary as Collector for the year	30 76	1,509 24	
Hawkins, W. L.	do Accountant, from 1st July to 30th Sept	6 00	294 00	
Fraser, Geo. J.	do Deputy Collector for the year.	19 96	980 04	
Hart, P. D.	do 2nd Class Exciseman do	16 96	833 04	
Jubinville, J. P.	do 2nd do 1st July to 31st March	11 25	554 04	
Webster, Thos	do 3rd do July.	1 25	61 25	
Lyons, Ed	do 3rd do for the year	13 20	646 80	
Murray, D	do 3rd do from 1st July to 30th April	8 56	466 42	
Henwood, Geo	do 2nd do from 1st Nov. to 30th June	11 32	557 84	
Hawkins, A. C	do Probationary Exciseman, 13th Feb. to 30th June	2 37	188 07	
Sinon, E. H.	do 1st Class Exciseman, 1st April to 25th May; Deputy Collector, from 26th May to 30th June	4 65	229 14	
Dodds, E. W	do 3rd Class Exciseman, 1st May to 30th June	2 40	117 60	
	Salaries	128 68	6,437 48	
	Contingencies		699 90	
				7,137 38
	Cornwall.			
Mulhern, M. M	Salary as Collector for the year	14 00	686 00	
	Contingencies		85 00	
				771 00
	Guelph.			
Powell, J. B.	Salary as Collector for the year	33 60	1,646 40	
Bouteiller, G. A.	do Special Class Exciseman for the year	28 04	1,371 96	
Till, T. M.	do Deputy Collector do	25 20	1,234 80	
Woodward, G. W.	do Special Class Exciseman do	24 00	1,176 00	
Campbell, J. McD.	do do 1st July to 30th May	22 00	1,078 00	
Lynes, K	do 1st Class Exciseman, 1st July to 25th May; Special Class, 26th May to 30th June	20 32	999 53	
Broadfoot, S.	do Accountant for the year	19 96	980 04	

APPENDIX B.—No. 1.—Details of Excise Expenditure, 1891—*Continued.*

To whom Paid.	Service.	Deduction for Superannuation.	Amount Paid.	Total Amount Paid.
	Guelph—Concluded.	$ cts.	$ cts.	$ cts.
Erb, A. A	Salary as 3rd Class Exciseman for the year...	15 00	735 00	
Howie, A..........	do 3rd do do ..	15 00	735 00	
Robson, Jas.......	do 3rd do 1st July to 31st August.....	2 50	122 50	
Gow, J. E...	do 3rd do 1st July to 31st Dec.; 2nd Class, 1st Jan. to 30th June....	13 80	676 20	
Macintire, D	do Probationary Exciseman, 1st July to 10th Aug.: 3rd Class, 11th Aug. to 31st Dec.; 2nd Class, 1st Jan. to 30th June	12 87	651 36	
Davis, Jas...	do 3rd Class Exciseman, 1st July to 31st Dec.; 2nd Class, 1st Jan. to 30th June	11 68	635 33	
Bowman, Allan....	do 3rd Class Exciseman, 8th Oct. to 30th June..........	5 90	384 42	
	Salaries..........	249 87	12,426 54	
	Contingencies	....	1,223 66	
				13,650 20
	Hamilton.			
Miller, W. F	Salary as Collector for the year	34 72	1,700 28	
Ross, S. F......	do Dep. Collector do	25 96	1,274 04	
McPherson, A. F..	do Accountant do	28 04	1,371 96	
Donaghy, Wm.....	do Special Class Exciseman for the year	28 04	1,371 96	
Greey, S..	do Special Class Exciseman do ..	24 00	1,176 00	
Baby, W. A. D....	do do 1st July to 30th Dec..	12 00	588 00	
Iler, B...... ...	do do for the year	24 00	1,176 00	
O'Brien, J. F.... .	do 1st Class Exciseman for the year .	18 03	885 72	
Crawford, W. P. ..	do 2nd do do	16 96	833 04	
Egener, A.........	do 2nd do do	16 96	833 04	
Hobbs, G. N	do 2nd do do	16 96	833 04	
Courtney, J. J... .	do 2nd do do ..	16 96	833 04	
Logan, J	do 2nd do do	16 85	824 40	
Amor, W	do 2nd do do ...	16 49	809 76	
Mackay, G. W.....	do 3rd do do ..	15 00	735 00	
Dumbrille, R. W ..	do 3rd do do	15 00	735 00	
Irwin, Robt.	do 3rd do do	14 10	690 90	
Allan, G. A.	do 2nd do 1st Feb. to 30th June	6 25	306 25	
Beasley, R. S....	do Messenger for the year.	3 72	296 28	
	Salaries........	350 04	17,273 71	
	Contingencies.....	....	479 53	
				17,753 24
	Kingston.			
Rowland, F.	Salary as Collector for the year.	31 96	1,568 04	
Grimason, T.	do Dep. Collector do	22 04	1,077 96	
Dickson, C. T.	do Accountant do	24 00	1,176 00	
Hanley, A...	do Asst. Accountant for the year	17 84	872 16	
Browne, G. W.....	do 2nd Class Exciseman do	16 96	833 04	
Fahey, Ed... . .	do 3rd do do	7 96	392 04	
O'Donnell, J.	do 3rd do do	14 10	690 90	

DR. APPENDIX A.—NO. 32.—HYDRAULIC and other Rents, &c.—

Balances due 1st July, 1890.	Accrued year ended 30th June, 1891.	Total.	Number.	Location.	Name of Proprietors.
$ cts.	$ cts.	$ cts.			LAND SALES—PRINCIPAL ACCOUNT.
12,092 83	....	12,092 83	1	Hamilton and Port Dover Road..............	Choat & Kern ....
433 34	....	433 34	2	Bonner's property, Quebec	Timothy Sullivan, now M. Murphy ....
333 34	....	333 34	3	....	John Bailey, now Alex. Powell.......
300 00	....	300 00	4	....	Abraham Thompson ....
147 80	....	147 80	5	....	John Boomer......................
248 40	....	248 40	6	....	John Garbatz, now J. C. Nolan.......
154 80	....	154 80	7	....	N. H. Bowen......................
600 00	....	600 00	8	....	Estate Robert Reid................
333 33	....	333 33	9	....	Jean Chevalier....................
533 33	....	533 33	10	....	Daniel Holden.....................
333 33	....	333 33	11	....	George Creeley ....
63 00	....	63 00	12	....	Thomas McAdam....................
15,573 50	....	15,573 50			
					LAND SALES—INTEREST ACCOUNT.
6,298 25	....	6,298 25	1	Hamilton and Port Dover Road..............	Choat & Kern (matured) ....
558 00	....	558 00	2	Bonner's property, Quebec	Timothy Sullivan, now M. Murphy ....
120 00	....	120 00	3	....	John Bailey, now Alex. Powell........
306 00	....	306 00	4	....	Abraham Thompson ....
155 22	....	155 22	5	....	John Boomer......................
275 82	....	275 82	6	....	John Garbatz, now J. C. Nolan.......
208 95	....	208 95	7	....	N. H. Bowen......................
828 00	....	828 00	8	....	Estate Robert Reid................
190 00	....	190 00	9	....	Jean Chevalier....................
298 68	....	298 68	10	....	Daniel Holden.....................
35 91	....	35 91	11	....	George Creeley ....
100 00	....	100 00	12	....	Thomas McAdam....................
100 00	....	100 00	13	....	Joseph Brook, tenant ....
9,474 83	....	9,474 83			

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

Lessees' Accounts, 1890-91—*Concluded.* Cr.

Description of Property.	Number.	Date to which the account is made up.	Paid during fiscal year.	Balances due 30th June, 1891.	Total.
			$ cts.	$ cts.	$ cts.
Hamilton and Port Dover Road and Caledonia Bridge	1			12,092 83	12,092 83
Lot No. 1, Wolfe street	2			433 34	433 34
do 9, do	3			333 34	333 34
do 49, do	4			300 00	300 00
do 73 and 74, Tower street	5			147 80	147 80
do 64, Wolfe street and 211 and 252, Ware street.	6			248 40	248 40
do 67 and 68, Monument street	7			154 80	154 80
do 22 and 23, Wolfe street	8			600 00	600 00
do 32, Wolfe street	9			333 33	333 33
do 65 and 66, Wolfe street	10			533 33	533 33
do 31, Wolfe street	11			333 33	333 33
do 135, Church street	12			63 00	63 00
				15,573 50	15,573 50
	1	June 30, 1871		6,298 25	6,298 25
Lot No. 1, Wolfe street	2	May 1, 1889		558 00	558 00
do 9, do	3	do		120 00	120 00
do 49, do	4	do		306 00	306 00
do 73 and 74, Tower street	5	do		155 22	155 22
do 64, Wolfe street and 211 and 252, Ware street.	6	do		275 82	275 82
do 67 and 68, Monument street	7	do		208 95	208 95
do 22 and 23, Wolfe street	8	do		828 00	828 00
do 32, Wolfe street	9	Nov. 1, 1863		190 00	190 00
do 65 and 66, Wolfe street	10	do		298 68	298 68
do 31, Wolfe street	11	do		35 91	35 91
do 135, Church street	12	do		100 00	100 00
Monument Hotel	13	do		100 00	100 00
				9,474 83	9,474 83

E. MIALL,
Commissioner.

APPENDIX B.

No. 1.—Details of Excise Expenditure, for the Year ended 30th June, 1891.

To whom Paid.	Service.	Deduction for Superannuation.	Amount Paid.	Total Amount Paid.
	Belleville.	$ cts.	$ cts.	$ cts.
McAllister, A.	Salary as Collector for the year	31 96	1,568 04	
Pole, C. W.	do Deputy Collector for the year.	24 00	1,176 00	
Craig, J.	do Special Class Exciseman, 1st July to 30th Sept	6 99	342 99	
Bish, P	do 1st Class Exciseman for the year	18 03	885 72	
McCoy, Wm.	do 1st do do	16 72	821 40	
McCuaig, A. F	do Deputy Collector do	4 96	395 04	
Spereman, J. J	do Special Class Exciseman, 1st Oct. to 30th June	20 97	1,028 97	
	Salaries	123 63	6,218 16	
	Contingencies		827 61	
				7,045 77
	Brantford.			
Spence, John	Salary as Collector for the year	30 76	1,509 24	
Hawkins, W. L.	do Accountant, from 1st July to 30th Sept	6 00	294 00	
Fraser, Geo. J.	do Deputy Collector for the year.	19 96	980 04	
Hart, P. D.	do 2nd Class Exciseman do	16 96	833 04	
Jubinville, J. P.	do 2nd do 1st July to 31st March	11 25	554 04	
Webster, Thos.	do 3rd do July.	1 25	61 25	
Lyons, Ed.	do 3rd do for the year.	13 20	646 80	
Murray, D	do 3rd do from 1st July to 30th April	8 56	466 42	
Henwood, Geo.	do 2nd do from 1st Nov. to 30th June	11 32	557 84	
Hawkins, A. C	do Probationary Exciseman, 13th Feb. to 30th June	2 37	188 07	
Sinon, E. H.	do 1st Class Exciseman, 1st April to 25th May; Deputy Collector, from 26th May to 30th June	4 65	229 14	
Dodds, E. W	do 3rd Class Exciseman, 1st May to 30th June	2 40	117 60	
	Salaries	128 68	6,437 48	
	Contingencies		699 90	
				7,137 38
	Cornwall.			
Mulhern, M. M	Salary as Collector for the year	14 00	686 00	
	Contingencies		85 00	
				771 00
	Guelph.			
Powell, J. B.	Salary as Collector for the year	33 60	1,646 40	
Bouteiller, G. A.	do Special Class Exciseman for the year	28 04	1,371 96	
Till, T. M.	do Deputy Collector do	25 20	1,234 80	
Woodward, G. W.	do Special Class Exciseman do	24 00	1,176 00	
Campbell, J. McD.	do do 1st July to 30th May	22 00	1,078 00	
Lynes, K.	do 1st Class Exciseman, 1st July to 25th May; Special Class, 26th May to 30th June	20 32	999 53	
Broadfoot, S.	do Accountant for the year	19 96	980 04	

APPENDIX B.—No. 1.—Details of Excise Expenditure, 1891—*Continued.*

To whom Paid.	Service.	Deduction for Superannuation.	Amount Paid.	Total Amount Paid.
	Guelph—Concluded.	$ cts.	$ cts.	$ cts.
Erb, A. A	Salary as 3rd Class Exciseman for the year	15 00	735 00	
Howie, A	do 3rd do do	15 00	735 00	
Robson, Jas	do 3rd do 1st July to 31st August	2 50	122 50	
Gow, J. E	do 3rd do 1st July to 31st Dec.; 2nd Class, 1st Jan. to 30th June	13 80	676 20	
Macintire, D	do Probationary Exciseman, 1st July to 10th Aug.: 3rd Class, 11th Aug. to 31st Dec.; 2nd Class, 1st Jan. to 30th June	12 87	651 36	
Davis, Jas	do 3rd Class Exciseman, 1st July to 31st Dec.; 2nd Class, 1st Jan. to 30th June	11 68	635 33	
Bowman, Allan	do 3rd Class Exciseman, 8th Oct. to 30th June	5 90	384 42	
	Salaries	249 87	12,426 54	
	Contingencies		1,223 66	
				13,650 20
	Hamilton.			
Miller, W. F	Salary as Collector for the year	34 72	1,700 28	
Ross, S. F	do Dep. Collector do	25 96	1,274 04	
McPherson, A. F	do Accountant do	28 04	1,371 96	
Donaghy, Wm	do Special Class Exciseman for the year	28 04	1,371 96	
Greey, S.	do Special Class Exciseman do	24 00	1,176 00	
Baby, W. A. D	do do 1st July to 30th Dec.	12 00	588 00	
Iler, B	do do for the year	24 00	1,176 00	
O'Brien, J. F	do 1st Class Exciseman for the year	18 03	885 72	
Crawford, W. P	do 2nd do do	16 96	833 04	
Egener, A	do 2nd do do	16 96	833 04	
Hobbs, G. N	do 2nd do do	16 96	833 04	
Courtney, J. J	do 2nd do do	16 96	833 04	
Logan, J	do 2nd do do	16 85	824 40	
Amor, W	do 2nd do do	16 49	809 76	
Mackay, G. W	do 3rd do do	15 00	735 00	
Dumbrille, R. W	do 3rd do do	15 00	735 00	
Irwin, Robt.	do 3rd do do	14 10	690 90	
Allan, G. A	do 2nd do 1st Feb. to 30th June	6 25	306 25	
Beasley, R. S	do Messenger for the year	3 72	296 28	
	Salaries	350 04	17,273 71	
	Contingencies		479 53	
				17,753 24
	Kingston.			
Rowland, F.	Salary as Collector for the year	31 96	1,568 04	
Grimason, T.	do Dep. Collector do	22 04	1,077 96	
Dickson, C. T.	do Accountant do	24 00	1,176 00	
Hanley, A	do Asst. Accountant for the year	17 84	872 16	
Browne, G. W	do 2nd Class Exciseman do	16 96	833 04	
Fahey, Ed	do 3rd do do	7 96	392 04	
O'Donnell, J.	do 3rd do do	14 10	690 90	

APPENDIX B.—No. 1.—Details of Excise Expenditure, 1891—*Continued.*

To whom Paid.	Service.	Deduction for Superannuation.	Amount Paid.	Total Amount Paid.
	Kingston—Concluded.	$ cts.	$ cts.	$ cts.
Hamilton, C. M.	Salary as 3rd Class Exciseman for the year	12 60	617 40	
Sullivan, L. D.	do 3rd do do	13 20	646 80	
	Salaries	160 66	7,874 34	
	Contingencies		1,119 72	
				8,994 06
	London.			
Alexander, Thos.	Salary as Collector for the year	36 00	1,764 00	
Davis, T. G.	do Deputy Collector for the year	30 00	1,470 00	
Power, T. A.	do do do	24 00	1,176 00	
Moore, Wm.	do 1st Class Exciseman do	19 96	980 04	
McSween, J.	do 1st do do	19 96	980 04	
Hicks, W. H	do Deputy Collector do	19 96	980 04	
Brown, J. J.	do 1st Class Exciseman from 1st to 31st July	1 66	81 67	
Barrett, T. J	do Accountant for the year	19 96	980 04	
Coles, F. H	do Asst. Accountant for the year	19 96	980 04	
Stewart, J.	do 1st Class Exciseman do	18 91	924 84	
Lee, E.	do 1st do do	18 03	885 72	
Taylor, J. F.	do 2nd do do	16 96	833 04	
Rowland, E.	do 2nd do do	16 96	833 04	
Yates, J. M.	do 2nd do do	16 96	833 04	
Neeland, H	do 3rd do do	15 00	735 00	
Wilson, D.	do 3rd do do	13 20	646 80	
Bayard, G. A	do 3rd do do	12 30	592 98	
Girard, Iréné	do 1st do 1st Oct. to 30th June	14 43	711 42	
	Salaries	334 21	16,387 75	
	Contingencies		1,740 29	
				18,128 04
	Ottawa.			
Battle, M	Salary as Collector for the year	31 96	1,568 04	
Henry, J. M. B.	do Dep. Collector do	24 00	1,176 00	
Bédard, W. G.	do 3rd Class Exciseman for the year	15 00	735 00	
Lett, F. P. A	do 3rd do do	15 00	735 00	
Waller, J	do 3rd do do	12 00	588 00	
Slattery, R.	do 1st do 1st Oct. to 30th June	13 71	674 70	
	Salaries	111 67	5,476 74	
	Contingencies		612 30	
				6,089 04
	Owen Sound.			
Graham, W. J	Salary as Collector for the year	19 96	980 04	
Lang, V.	do 3rd Class Exciseman for the year	15 00	735 00	
Chisholm, W. N.	do Dep. Collector, 21st July to 30th June	5 90	467 14	
	Salaries	40 86	2,182 18	
	Contingencies		253 82	
				2,436 00

APPENDIX B.—No. 1.—Details of Excise Expenditure, 1891—*Continued.*

To whom Paid.	Service.	Deduction for Superannuation.	Amount Paid.	Total Amount Paid.
	Perth.	$ cts.	$ cts.	$ cts.
Kellock, D	Salary as Collector for the year	28 04	1,371 96	
Conway, B. J	do Special Class Exciseman, 1st July to 31st August	4 66	228 66	
McKimm, U. H	do Deputy Collector for the year	12 00	588 00	
Devine, F. M	do do do	4 96	395 04	
Mason, F	do Special Class Exciseman, 1st Sept. to 30th June	23 30	1,143 30	
Harty, M. J	do Dep. Collector, 21st Nov. to 30th June	3 02	241 40	
	Salaries	75 98	3,968 36	
	Contingencies		582 54	
				4,550 90
	Peterborough.			
Hall, J. J	Salary as Collector for the year	22 04	1,077 96	
Cahill, Thos	do Dep. Collector do	18 00	882 00	
Murphy, F	do 2nd Class Exciseman for the year	15 51	834 45	
Bickle, J. W.	do Deputy Collector do	13 96	686 04	
Knowlson, J. B	do do do	13 96	686 04	
Howden, R	do do do	13 96	686 04	
	Salaries	97 43	4,852 53	
	Contingencies		526 04	
				5,378 57
	Port Arthur.			
Ironside, G. A	Salary as Collector for the year	20 00	980 00	
	Contingencies		188 18	
				1,168 18
	Prescott.			
Dumbrille, J	Salary as Collector for the year	35 64	1,749 36	
Keilty, T	do Deputy Collector for the year	25 96	1,274 04	
Mason, F	do Special Class Exciseman, 1st July to 31st Aug	4 66	228 66	
Gerald, W. H	do Special Class Exciseman, 1st July to 30th Sept	6 00	294 00	
Slattery, R	do 1st Class Exciseman, 1st July to 30th Sept	4 29	211 02	
Jamieson, R. C	do Deputy Collector for the year	16 51	808 49	
Ferguson, J	do 3rd Class Exciseman do	15 00	735 00	
Marshall, F	do do do	15 00	735 00	
Johnston, Geo. E	do do do	15 00	735 00	
Macdonald, A, B	do do do	14 10	690 90	
Keeler, Geo. S	do do do	13 20	646 80	
Conway, B. J	do Special Class Exciseman, 1st Sept. to 30th June	23 30	1,143 30	
Boyle, P	do Prob. Exciseman, 16th Sept. to 30th June	6 62	418 47	
Craig, J	do Special Class Exciseman, 1st Oct. to 30th June	20 97	1,028 97	
	Salaries	216 25	10,699 01	
	Contingencies		797 00	
				11,496 01

APPENDIX B.—No. 1.—Details of Excise Expenditure, 1891—*Continued.*

To whom Paid.	Service.	Deduction for Superannuation.	Amount Paid.	Total Amount Paid.
	Kingston—Concluded.	$ cts.	$ cts.	$ cts.
Hamilton, C. M.	Salary as 3rd Class Exciseman for the year	12 60	617 40	
Sullivan, L. D.	do 3rd do do	13 20	646 80	
	Salaries	160 66	7,874 34	
	Contingencies		1,119 72	
				8,994 06
	London.			
Alexander, Thos.	Salary as Collector for the year	36 00	1,764 00	
Davis, T. G.	do Deputy Collector for the year	30 00	1,470 00	
Power, T. A.	do do do	24 00	1,176 00	
Moore, Wm.	do 1st Class Exciseman do	19 96	980 04	
McSween, J.	do 1st do do	19 96	980 04	
Hicks, W. H.	do Deputy Collector do	19 96	980 04	
Brown, J. J.	do 1st Class Exciseman from 1st to 31st July	1 66	81 67	
Barrett, T. J.	do Accountant for the year	19 96	980 04	
Coles, F. H.	do Asst. Accountant for the year	19 96	980 04	
Stewart, J.	do 1st Class Exciseman do	18 91	924 84	
Lee, E.	do 1st do do	18 03	885 72	
Taylor, J. F.	do 2nd do do	16 96	833 04	
Rowland, E.	do 2nd do do	16 96	833 04	
Yates, J. M.	do 2nd do do	16 96	833 04	
Neeland, H.	do 3rd do do	15 00	735 00	
Wilson, D.	do 3rd do do	13 20	646 80	
Bayard, G. A.	do 3rd do do	12 30	592 98	
Girard, Irénè	do 1st do 1st Oct. to 30th June	14 43	711 42	
	Salaries	334 21	16,387 75	
	Contingencies		1,740 29	
				18,128 04
	Ottawa.			
Battle, M.	Salary as Collector for the year	31 96	1,568 04	
Henry, J. M. B.	do Dep. Collector do	24 00	1,176 00	
Bédard, W. G.	do 3rd Class Exciseman for the year	15 00	735 00	
Lett, F. P. A.	do 3rd do do	15 00	735 00	
Waller, J.	do 3rd do do	12 00	588 00	
Slattery, R.	do 1st do 1st Oct. to 30th June	13 71	674 70	
	Salaries	111 67	5,476 74	
	Contingencies		612 30	
				6,089 04
	Owen Sound.			
Graham, W. J.	Salary as Collector for the year	19 96	980 04	
Lang, V.	do 3rd Class Exciseman for the year	15 00	735 00	
Chisholm, W. N.	do Dep. Collector, 21st July to 30th June	5 90	467 14	
	Salaries	40 86	2,182 18	
	Contingencies		253 82	
				2,436 00

APPENDIX B.—No. 1.—Details of Excise Expenditure, 1891—*Continued.*

To whom Paid.	Service.	Deduction for Superannuation.	Amount Paid.	Total Amount Paid.
	Perth.	$ cts.	$ cts.	$ cts.
Kellock, D.	Salary as Collector for the year	28 04	1,371 96	
Conway, B. J.	do Special Class Exciseman, 1st July to 31st August	4 66	228 66	
McKimm, U. H.	do Deputy Collector for the year	12 00	588 00	
Devine, F. M	do do do	4 96	395 04	
Mason, F	do Special Class Exciseman, 1st Sept. to 30th June	23 30	1,143 30	
Harty, M. J.	do Dep. Collector, 21st Nov. to 30th June	3 02	241 40	
	Salaries	75 98	3,968 36	
	Contingencies		582 54	
				4,550 90
	Peterborough.			
Hall, J. J.	Salary as Collector for the year	22 04	1,077 96	
Cahill, Thos.	do Dep. Collector do	18 00	882 00	
Murphy, F.	do 2nd Class Exciseman for the year	15 51	834 45	
Bickle, J. W.	do Deputy Collector do	13 96	686 04	
Knowlson, J. B.	do do do	13 96	686 04	
Howden, R	do do do	13 96	686 04	
	Salaries	97 43	4,852 53	
	Contingencies		526 04	
				5,378 57
	Port Arthur.			
Ironside, G. A.	Salary as Collector for the year	20 00	980 00	
	Contingencies		188 18	
				1,168 18
	Prescott.			
Dumbrille, J.	Salary as Collector for the year	35 64	1,749 36	
Keilty, T.	do Deputy Collector for the year	25 96	1,274 04	
Mason, F	do Special Class Exciseman, 1st July to 31st Aug.	4 66	228 66	
Gerald, W. H.	do Special Class Exciseman, 1st July to 30th Sept	6 00	294 00	
Slattery, R	do 1st Class Exciseman, 1st July to 30th Sept	4 29	211 02	
Jamieson, R. C.	do Deputy Collector for the year	16 51	808 49	
Ferguson, J.	do 3rd Class Exciseman do	15 00	735 00	
Marshall, F.	do do do	15 00	735 00	
Johnston, Geo. E.	do do do	15 00	735 00	
Macdonald, A, B.	do do do	14 10	690 90	
Keeler, Geo. S.	do do do	13 20	646 80	
Conway, B. J.	do Special Class Exciseman, 1st Sept. to 30th June	23 30	1,143 30	
Boyle, P.	do Prob. Exciseman, 16th Sept. to 30th June	6 62	418 47	
Craig, J.	do Special Class Exciseman, 1st Oct. to 30th June	20 97	1,028 97	
	Salaries	216 25	10,699 01	
	Contingencies		797 00	
				11,496 01

Appendix B.—No. 1.—Details of Excise Expenditure, 1891—*Continued.*

To whom Paid.	Service.	Deduction for Superannuation.	Amount Paid.	Total Amount Paid.
	Stratford.	$ cts.	$ cts.	$ cts.
Caven, A	Salary as Collector for the year	31 96	1,568 04	
Rennie, Geo	do Deputy Collector for the year	24 00	1,176 00	
Dingman, N. J	do Exciseman do	24 00	1,176 00	
Nichols, J. T	do Deputy Collector do	19 96	980 04	
Spence, F. H	do 1st Class Exciseman do	19 96	980 04	
Clark, A. F	do Accountant do	18 00	882 00	
Caven, J. McD	do 3rd Class Exciseman do	12 60	617 40	
	Salaries	150 48	7,379 52	
	Contingencies		1,101 64	
				8,481 16
	St. Catharines.			
Hesson, C. A	Salary as Collector for the year	22 04	1,077 96	
Schram, B	do Deputy Collector for the year	24 00	1,176 00	
Milliken, E	do 2nd Class Exciseman do	16 96	833 04	
	Salaries	63 00	3,087 00	
	Contingencies		552 70	
				3,639 70
	Toronto.			
Stratton, W. C.	Salary as Collector for the year	43 96	2,156 04	
Bennett, Jas	do Deputy Collector for the year	30 00	1,470 00	
Dudley, W. H.	do Special Class Exciseman for the year	30 00	1,470 00	
Blair, J. B	do Accountant do	28 04	1,371 96	
Macdonell, A. D	do Deputy Collector, from 1st July to 31st Aug	4 32	212 34	
Rogerson, J. M	do Special Class Exciseman for the year	24 00	1,176 00	
Dawson, W	do do do	24 00	1,176 00	
Quinn, J. D	do do do	24 00	1,176 00	
Boomer, J. B	do Assistant Accountant do	22 04	1,077 96	
Coleman, C	do Deputy Collector do	19 96	980 04	
Shanacy, M	do do do	19 96	980 04	
Henderson, W.	do 1st Class Exciseman do	19 96	980 04	
Evans, G. T	do do do	19 30	943 20	
Weyms, Chas	do do do	18 70	913 80	
Dick, J. W	do do do	18 05	883 20	
Helliwell, H. N.	do do do	18 03	885 72	
Barber, J. S	do 2nd do do	16 96	833 04	
Murray, A. E	do do do	16 96	833 04	
O'Leary, T. J	do 1st do do	17 82	874 68	
Goodman, A. W	do do do	17 82	874 68	
Westman, Thos	do do do	17 82	874 68	
Hamilton, T. C	do 2nd do 1st July to 30th Sept.	3 84	188 64	
Flynn, D	do do 1st July to 31st Dec.; 1st Class, 1st Jan. to 30th June	16 50	804 12	
Adams, J. S.	do 3rd Class Exciseman for the year	15 00	735 00	
Dodds, E. W	do do 1st July to 30th April	12 00	588 00	
Walsh, D. J	do do 1st July to 30th Dec.; 2nd Class, 31st Dec. to 30th June	14 40	705 60	
Reddan, C. J	do 3rd Class Exciseman for the year	12 60	617 40	
Winter, A. W	do do do	12 00	588 00	
Taylor, G. W	do do from 1st July to 31st Dec.; 2nd Class, 1st Jan. to 30th June	13 80	676 20	
McDonald, J. A	do 1st Class Exciseman for the year	18 03	885 72	

Appendix B.—No. 1.—Details of Excise Expenditure, 1891—*Continued.*

To whom paid.	Service.	Deduction for Superannuation.	Amount Paid.	Total Amount Paid.
	Toronto—Continued.	$ cts.	$ cts.	$ cts.
Brown, J. J ..	Salary as 1st Class Exciseman, from 1st Aug. to 30th June	18 26	898 37	
Metcalf, W. F	do do 24th July do	18 69	919 44	
Cosgrove, J. J	do Dep. Collector, 1st Sept. to 30th June	16 60	816 70	
Howard. W. S	do Prob. Exciseman, 20th Sept. do	4 82	381 23	
Earle, R. H	do Special Class Exciseman, 1st Jan. to 30th June	11 13	545 53	
Bell, J. E	do Prob. Exciseman, 1st Feb. to 30th June	2 60	205 70	
Lawder, John	do Dep. Collector, 10th Feb. to 30th June	0 47	38 50	
Murray, D	do 3rd Class Exciseman, 1st May to 30th June	2 00	98 00	
Graham, W. T	do Messenger for the year	5 20	416 70	
	Salaries	649 64	32,251 31	
	Contingencies	....	1,762 28	
				34,013 59
	Windsor.			
Kenning, J. H	Salary as Collector for the year	43 96	2,156 04	
Ramon, P	do Deputy Collector for the year	30 00	1,470 00	
Gerald, C	do Special Class Exciseman for the year	30 00	1,470 00	
Crowe, W	do do do do	28 04	1,371 96	
Cox, J. E	do do do do	24 00	1,176 00	
Dunlop, C	do Deputy Collector for the year	24 00	1,176 00	
Beasley, R.	do Accountant do	24 00	1,176 00	
Girard, I	do 1st Class Exciseman, 1st July to 30th Sept	4 53	223 26	
Brennan, J	do 1st do for the year			
Sinon, E. H	do 1st do 1st July to 31st	17 82	874 68	
	March	13 32	656 01	
Henwood, Geo	do 2nd do 1st July to 31st Oct	5 60	275 20	
Falconer, J	do 3rd do for the year	15 00	735 00	
Keogh, P. M	do 3rd do do	15 00	735 00	
Crotty, Jno	do 3rd do do	13 80	676 20	
Cahill, J. W.	do 3rd do do	13 20	646 80	
Allan, G. A	do 3rd do 1st July to 31st Dec.; 2nd Class, 1st Jan. to 31st Jan	7 85	384 65	
Weir, Jas	do 3rd Class Exciseman, 1st June to 31st Dec; 2nd Class, 1st Jan. to 30th June	13 80	676 20	
Marcon, J. E	do 3rd Class Exciseman for the year	9 60	548 70	
Bradley, Carrie	do 3rd do Officer, from 15th Sept. to 30th June	6 66	420 10	
Thomas, Robt	do Probationary Officer, from 26th Jan. to 30th June	2 70	213 66	
Brennan, D. J	do Probationary Officer, from 14th Feb. to 30th June	2 36	186 59	
Jubenville, J. P	do 2nd Class Officer, from 1st April to 30th June	3 75	184 68	
	Salaries	348 99	17,432 73	
	Contingencies	....	620 09	
				18,052 82

APPENDIX B.—No. 1.—Details of Excise Expenditure, 1891—*Continued.*

To whom Paid.	Service.	Deduction for Superannuation.	Amount Paid.	Total Amount Paid.
	Joliette.	$ cts.	$ cts.	$ cts.
Leprohon, R. M....	Salary as Collector for the year	19 96	980 04	
Richard, J. B. T...	do Deputy Collector for the year.	3 72	296 28	
Baby, W. A. D....	do Special Class Exciseman, 1st Jan. to 30th June.	12 00	588 00	
Marion, Eugène....	do Probationary Officer, 8th Jan. to 30th June......	3 00	237 55	
	Salaries.......	38 68	2,101 87	
	Contingencies.....	....	965 78	
				3,067 65
	Montreal.			
Vincent, J. L	Salary as Collector for the year	43 96	2,156 04	
Dodd, J.	do Deputy Collector for the year.. .	30 00	1,470 00	
Lawlor, H...... ...	do do do	30 00	1,470 00	
Macdonald, D......	do Accountant do	28 04	1,371 96	
Baby, J. C	do Special Class Exciseman for the year.	24 00	1,176 00	
Caven, W..... ...	do do do do ..	24 00	1,176 00	
Earle, R. H..	do do do 1st July to 31st Dec..	12 00	588 00	
Lecours, H. T	do Assistant Accountant for the year..	22 04	1,077 96	
Hudon, A.........	do Exciseman for the year.	19 96	980 04	
Beauchamp, J. P ..	do 1st Class Exciseman for the year ...	19 95	980 04	
Fox, T	do 1st do do	19 96	980 04	
Standish, J. G. ...	do 1st do do	19 96	980 04	
Harwood, R. U....	do 1st do do	19 30	943 20	
St. Marie, L. C. A.	do Book-keeper do ...	18 84	926 16	
Hastie, W.........	do Exciseman do ...	18 00	882 00	
Fox, J. D..	do 1st Class Exciseman do	18 52	906 48	
Toupin, F.-X. J. A.	do 1st do do	18 03	885 72	
Barker, C	do 2nd do do	16 96	833 04	
Bulmer, J.........	do 2nd do do	16 96	833 04	
Goron, D	do 2nd do do	16 96	833 04	
Malo, T...........	do 2nd do do	16 96	833 04	
Tansey, J. P. F....	do 2nd do 1st July to 31st March	12 69	624 78	
Scullion, J. W.....	do 2nd do for the year.....	16 96	833 04	
Dumouchel, L......	do 2nd do do	16 96	833 04	
Villeneuve, J	do Exciseman do ...	16 04	783 96	
McClanaghan, M ..	do 2nd Class Exciseman do ...	16 05	775 20	
Millier, E..........	do 3rd do do	15 00	735 00	
Perry, G. L.......	do 3rd do do	15 00	735 00	
Manning, J...... ...	do 3rd do do ...	15 00	735 00	
Baby, Jos........ ...	do 3rd do do ...	15 00	735 00	
Panneton, G. E. ..	do 3rd do do	15 00	735 00	
Pinsonnault, A	do 3rd do do ..	15 00	735 00	
Laporte, Geo	do 3rd do do	15 00	735 00	
Watkins, J. A. ...	do 3rd do do	15 00	735 00	
Costigan, J. J.....	do 3rd do do	13 80	676 20	
Coleman, J. J....	do 3rd do do	14 40	705 60	
Dixon, H. G. S...	do 3rd do do ...	13 20	646 80	
Codd, H. J. S. ...	do 3rd do do .	12 00	588 00	
Verner, F... ...	do 3rd do do	13 50	661 50	
Racicot, C. G . .	do 3rd do 13th July to 30th June	11 81	584 95	
Reilly, J. S.	do 3rd do for the year	10 14	557 58	
Daveluy, J. P.....	do 3rd do 17th July to 30th June	8 65	518 72	
O'Flaherty, E. J...	do 3rd Class Exciseman, 12th Sept. to 30th June	6 76	424 96	

Appendix B.—No. 1.—Details of Excise Expenditure, 1891—*Continued.*

To whom Paid.	Service.	Deduction for Superannuation.	Amount Paid.	Total Amount Paid.
		$ cts.	$ cts.	$ cts.
	Montreal—Concluded.			
Forest, E. R.	Salary as 1st Class Exciseman, 1st Oct. to 30th June	13 53	666 42	
Brabant, J. B. G. N.	do 3rd Class Exciseman, 1st Oct. to 30th June	6 12	393 84	
Doyle, B. J.	do 3rd Class Exciseman, 5th Jan. to 30th June	3 05	241 53	
Fraser, P.	do 3rd Class Exciseman, 1st Feb. to 30th June	2 60	205 70	
Lane, T. M.	do 3rd Class Exciseman, 25th March to 30th June	1 68	132 77	
Cullen, P.	do Messenger for the year	13 96	686 04	
	Salaries	798 31	39,702 47	
	Contingencies		3,982 28	
				43,684 75
	Quebec.			
LaRue, Geo.	Salary as Collector for the year	31 96	1,568 04	
Cahill, J. H.	do Deputy Collector for the year	24 00	1,176 00	
Cameron, D. M.	do Special Class do	26 20	1,284 90	
McNamara, M.	do 1st Class Exciseman do	19 96	980 04	
Bourassa, Geo.	do Exciseman do	16 04	783 96	
Rouleau, J.	do 3rd Class Exciseman do	15 00	735 00	
LeMoine, J.	do do do	15 00	735 00	
Bourget, O.	do do do	15 00	735 00	
Lépine, L.	do do do	15 00	735 00	
Langlois, F. X.	do do do	15 00	735 00	
Fahey, Owen	do do do	14 40	705 60	
Sexton, John	do do do	12 60	617 40	
	Salaries	220 16	10,790 94	
	Contingencies		1,317 78	
				12,108 72
	Sherbrooke.			
Simpson, A. F.	Salary as Collector for the year	24 00	1,176 00	
Pennoyer, H. J.	do 3rd Class Exciseman for the year	15 00	735 00	
	Salaries	39 00	1,911 00	
	Contingencies		430 01	
				2,341 01
	Sorel.			
Fortier, J. J. O.	Salary as Collector for the year	15 44	754 56	
Duguay, Jos.	do Exciseman do		499 92	
	Salaries	15 44	1,254 48	
	Contingencies		49 85	
				1,304 33
	St. Hyacinthe.			
Boivin, C. A.	Salary as Collector for the year	19 10	935 90	
	Contingencies		364 18	
				1,300 08

APPENDIX B.—No. 1.—Details of Excise Expenditure, 1891—*Continued.*

To whom Paid.	Service.	Deduction for Superannuation.	Amount Paid.	Total Amount Paid.
	St. John's.	$ cts.	$ cts.	$ cts.
Boucher, O. N. E..	Salary as Deputy Collector for the year	12 00	588 00	
Forest, Eugène R..	do 2nd Class Exciseman, 1st July to 30th September..........	4 23	208 26	
Perkins, G. A.	do Deputy Collector for the year	5 48	434 52	
Gatien, F.	do 3rd Class Exciseman do	12 30	602 70	
	Salaries.........................	34 01	1,833 48	
	Contingencies	.....	348 70	2,182 18
	Terrebonne.			
Desroches, D	Salary as Collector for the year	13 96	686 04	
Fiset, A..........	do Deputy Collector for the year......	2 48	197 52	
	Salaries	16 44	883 56	
	Contingencies	.....	318 91	1,202 47
	Three Rivers.			
Hébert, Chas. D. ..	Salary as Collector for the year	19 96	980 04	
Duplessis, C. Z ...	do 3rd Class Exciseman for the year ...	15 00	735 00	
	Salaries..........................	34 96	1,715 04	
	Contingencies	....	103 61	1,818 65
	Chatham.			
Lawlor, R. A ...	Salary as Collector for the year	22 04	1,077 96	
Renaud, A.......	do Dep. Collector do	4 04	195 96	
	Salaries..........................	26 08	1,273 92	
	Contingencies	....	72 78	1,346 70
	St. John.			
Burke, T.......	Salary as Collector, from 1st July to 16th April	23 35	1,144 52	
Atherton, R......	do Dep. Collector do do ; Collector, 17th April to 30th June	24 80	1,216 19	
Belyea, T. H	do Accountant, 1st July to 30th June..	20 40	999 60	
Mason, Jas........	do 3rd Class Exciseman, for the year...	15 00	735 00	
Smyth, B. B.	do do do ...	13 80	676 20	
McCloskey, J. R...	do do do ...	14 40	705 60	
Ferguson, J. C. .	do do do ...	12 00	588 00	
Hill, A. M.	do Deputy Collector do ...	10 04	489 96	
Dibblee, Wm......	do do do ...	3 72	296 28	
Clark, Jas. A. ...	do do 24th April to 30th June	4 15	203 61	
	Salaries..........................	141 66	7,054 96	
	Contingencies	....	493 37	7,548 33
	Cape Breton.			
McDonald, M. A ..	Salary as Collector for the year...............	15 00	735 00	
	Contingencies	......	144 37	879 37

APPENDIX B.—No. 1.—Details of Excise Expenditure, 1891—*Continued.*

To whom Paid.	Service.	Deduction for Superannuation.	Amount Paid.	Total Amount Paid.
	Halifax.	$ cts.	$ cts.	$ cts.
Grant, H. H.	Salary as Collector for the year	31 96	1,568 04	
Spereman, J. J	do Special Class, from 1st July to 30th Sept.	6 99	342 99	
King, R. M.	do Deputy Collector for the year.	24 00	1,176 00	
James, T. C.	do Accountant do	19 96	980 04	
Carroll, D.	do 1st Class Exciseman do	19 96	980 04	
Wainwright, F. G.	do 2nd do do	16 96	833 04	
Tompkins, P.	do 3rd do do	15 00	735 00	
Hagarty, P.	do 3rd do do	15 00	735 00	
Munro, H. D	do 3rd do do	15 00	735 00	
Blethen, C. W.	do 3rd do do	14 40	705 60	
Gerald, W. H.	do Special Class, 1st Oct. to 30th June.	20 59	1,010 46	
	Salaries	199 82	9,801 21	
	Contingencies		1,083 64	
				10,884 85
	Pictou.			
Dustan, W. M.	Salary as Collector for the year	19 96	980 04	
Campbell, G. J	do 3rd Class Exciseman for the year	15 00	735 00	
	Salaries		1,715 04	
	Contingencies		176 84	
				1,891 88
	Charlottetown.			
Nash, S. C.	Salary as Collector for the year	22 04	1,077 96	
do	Special for extra services		125 00	
Moore, Theo.	Salary 2nd Class Exciseman, 1st July to 11th Dec.; Deputy Collector, 12th Dec. to 30th June	18 58	914 44	
	Salaries.	40 62	2,117 40	
	Contingencies		162 05	
				2,279 45
	Winnipeg.			
Costigan, H. A	Salary as Collector for the year	43 96	2,156 04	
Christie, W. J.	do Dep. Collector do	30 00	1,470 00	
Gosnell, T. S	do Accountant do	28 04	1,371 96	
Camyré, J. N	do 2nd Class Exciseman for the year	16 96	833 04	
Girdlestone, R. J. M.	do Deputy Collector do	16 96	833 04	
Code, A.	do 3rd Class Exciseman, 1st July to 31st Dec.; 2nd Class, 1st Jan. to 30th June	14 40	705 60	
Saucier, X.	do 3rd Class Exciseman, 1st July to 31st Dec.; 2nd Class, 1st Jan. to 30th June	13 50	661 50	
Hawkins, W. L.	do Accountant, 1st Oct. to 30th June	18 00	882 00	
Colclough, J. W.	do Dep. Collector, 4th Nov. to 30th June	2 05	162 50	
O'Brien, E. C.	do Probationary Exciseman, 10th Feb. to 30th June	2 43	192 48	
	Salaries	186 30	9,268 16	
	Contingencies		2,055 93	
				11,324 09

APPENDIX B—No. 1.—Details of Excise Expenditure, 1891—*Continued.*

To whom Paid.	Service.	Deducted for Superannuation.	Amount Paid.	Total Amount Paid.
	Vancouver.	$ cts.	$ cts.	$ cts.
Miller, J. E.. ...	Salary as Collector for the year	24 00	1,176 00	
Dowling, Thos.....	do Dep. Collector, 1st Aug. to 30th June	12 76	628 87	
	Salaries...........................	36 76	1,804 87	
	Contingencies	....	1,094 20	2,899 07
	Victoria.			
Jones, R..........	Salary as Collector for the year	16 04	783 96	
Williams, G......	do Deputy Collector for the year.......	22 04	1,077 96	
Dowling, Thos.....	do do for July........	1 16	57 17	
Leighton, W. R....	do do for the year.......	5 81	294 19	
	Salaries.......	45 05	2,213 28	
	Contingencies...........	....	1,412 57	3,625 85
	DISTRICT INSPECTORS.			
	Ontario.			
Morrow, John.....	Salary for the year	50 00	2,450 00	
	Contingencies	....	444 41	2,894 41
Gow, Jas..........	Salary for the year.............	48 00	2,352 00	
	Contingencies	....	642 06	2,994 06
Hamilton, W. L...	Salary for the year.........................	48 00	2,352 00	
	Contingencies	....	1,312 40	3,664 40
	Quebec.			
Bellemare, R	Salary for the year....	....	2,500 00	
	Contingencies	....	345 46	2,845 46
LeMoine, J. M	Salary for the year	......	2,200 00	
	Contingencies	..... .	287 94	2,487 94
	Nova Scotia and Prince Edward Island.			
Borradaile, R	Salary for the year.	48 00	2,352 00	
	Contingencies	....	1,014 47	3,366 47
	New Brunswick.			
Moore, J. N........	Salary from 1st July to 31st August..........	7 32	359 34	
	Contingencies	......	179 54	
Burke, T..........	Salary from 17th April to 30th June..........	6 56	322 16	
	Contingencies	....	121 94	982 98
	Manitoba.			
Barrett, J. K.	Salary for the year	50 00	2,450 00	
	Contingencies	....	1,499 57	3,949 57
	British Columbia.			
Gill, Wm..........	Salary for the year.........	44 00	2,156 00	
	Contingencies	....	862 40	3,018 40

APPENDIX B—No. 1.—Details of Excise Expenditure, 1891—*Continued.*

To whom Paid.	Service.	Deducted for Superannuation.	Amount Paid.	Total Amount Paid.
		$ cts.	$ cts.	$ cts.
	INSPECTOR OF DISTILLERIES.			
Davis, John	Salary for the year	56 00	2,744 00	
	Contingencies		1,673 68	4,417 68
	CHIEF INSPECTOR.			
Godson, Henry	Salary for the year	56 00	2,744 00	
	Contingencies		294 71	3,038 71
	MANAGER WOOD NAPHTHA WAREHOUSE.			
Flynn, J. P.	Salary for the year	18 07		885 68
	INSPECTOR OF TOBACCO FACTORIES.			
Gerald, W. J.	Contingencies			221 77
	INSPECTOR OF BONDED FACTORIES.			
Morrow, John.	Contingencies			238 80

APPENDIX B.—No. 1.—Details of Excise Expenditure, 1890-91—*Continued.*

To whom paid.	Service.	Amount Paid.	Total Amount Paid.
	General Excise Contingencies.	$ cts.	$ cts.
Guilfoyle, Mrs. B	Extra work, from 10th to 19th July, and from 10th to 17th January, inclusive, at $400 per annum	19 72	
Foran, J. K.	Extra work, from 11th August to 10th October, and from 27th to 29th October, inclusive, at $400 per annum	69 70	
O'Sullivan, Miss M. A.	Extra work, from 27th August to 6th September, and from 30th December, to 8th January, inclusive, at $400 per annum	23 01	
Weir, J. P.	Extra work, from 21st August to 20th September, at $400 per annum	33 33	
Valin, Ernest	Extra work, from 21st August to 22nd October, and from 20th March to 3rd April, at $400 per annum	85 46	
Bossé, H.	Services as extra writer during 7 months, at $400 per annum, as follows: August, October, November, December, and January, March, April	234 13	
Glen, Miss M. M	Extra work, from 16th September to 16th October, at $400 per annum	33 97	
McCarthy, Miss M.	Extra work, from 27th June to 26th July, from 27th September to 27th October, and from 5th February to 7th March, at $400 per annum	100 63	
O'Hanly, Miss F.	Services as Typewriter during 8 days, at $400 per annum	8 77	
Foran, Miss L. M. C.	Extra work, 121 days at $400 per annum	131 50	
Hughes, P. A.	Services as extra clerk, from 6th February, to 31st March, at $400 per annum	59 18	
Garland, P.	Extra work, from 16th March to 15th April, at $400 per annum	33 33	
Fox, Miss H.	Extra work, from 18th to 27th May, at $400 per annum	10 75	
Melanson, Sam.	Extra work, from 1st May to 30th June, at $400 per annum	66 66	
Barry, Miss A.	Extra work, from 2nd May to 5th June, inclusive, at $400 per annum	38 35	
Miller Lock Co.	50½ doz. locks at $16, including ⅛ per cent. commission on same	802 33	
The B. A. Bank Note Co	On account of tobacco stamps, &c.	25,895 87	
Gerald, Chas.	Railway fare and personal expenses from Walkerville to Ottawa and return, from 17th to 27th September, on special duty	57 50	
Wilson, W. J.	Expenses on an iron tank returned	3 50	
Dumbrille, J.	Expenses of Officer W. H. Gerald to Ottawa on official duty	21 80	
Registrar, Exchequer Court of Canada	Writ of assistance in favour of Wm. Dustan	2 90	
Tucker & Reeves	Excise locks	379 60	
The Canada Atlantic Railway Co	Freight on excise locks	18 05	
Birkett, Thos.	Hardware	34 15	
The E. B. Eddy Manufacturing Co	Lumber	20 00	
Esmonde, J. R.	2 galvanized tanks	6 50	
Sedgewick, R.	Writ of assistance in favour of D. M. Cameron	2 90	
Miall, E.	Paid for stenographer	10 00	
Webbs Adder Co.	1 mechanical adder	7 10	
Potter, Chas.	24 brass boxes	19 20	
The Canadian Rubber Co	Rubber tubing	15 20	
The Canadian Pacific Ry	Freight on instruments	20 25	

APPENDIX B—No. 1.—Detail of Excise Expenditure, 1890-91—*Continued.*

To whom Paid.	Service.	Amount Paid.	Total Amount Paid.
	General Excise Contingencies—Concluded.	$ cts.	$ cts.
Oertling, L	12 saccharometers, with thermometers, etc	309 64	
Grant, J. F	Subscription to Dickerman's Detector, 57 copies, for one year, from 1st June, 1891, to 1st June, 1892	57 00	
Rowland, F	Travelling expenses of C. M. Hamilton to Toronto *re* Brewing and Malting Co	16 85	
Harris & Campbell	2 curtains and rings for Department	12 60	
Wiser, J. P	3 barrels for fusil oil	7 50	
Lawlor, H	Services as guardian of property under seizure as per O.C., 31st August, 1891	25 00	
	Total	28,693 93	
	DEDUCT—Received from sale of tanks, thermometers, hydrometers, petroleometers, fusil oil, furniture, instruments, &c	201 10	
	Total General Contingencies		28,492 83

APPENDIX B.—No. 1.—Detail of Excise Expenditure, 1890-91—*Continued.*

To whom Paid.	Service.	Amount Paid.	Total Amount Paid.
	Law Costs.	$ cts.	$ cts.
Graham, Wallace, Q.C.	Professional services *in re* McDonald *vs.* Clarke.	580 35	
do	Professional services *in re* John K. McDonnell, charges as Justice of the Peace, Regina *vs.* J. W. McIsaac and Wm. McMillan	7 50	
			587 85
Cameron, J. D.	Professional services *in re* several seizures		88 70
Jamieson, J. H.	do sundry prosecutions for illicit distilling		50 00
McConville, J. N. A.	Professional services *in re* Regina *vs.* Laviolette.	62 45	
do	Professional services *in re* Regina *vs.* Lamarche.	99 20	
do	Professional services *in re* Regina *vs.* Bourgeois, Cotnoir and Kelly	46 55	
			208 20
Hall, J. S., jun., Q.C.	Professional services *in re* Regina *vs.* Poupport.	20 00	
do	Professional services *in re* Regina *vs.* Eugene O'Neil and Anna O'Neil	53 89	
do	Professional services *in re* Regina *vs.* Paquette, Rochette, Pringle, Bédard, Potvin and Pelletier	68 00	
do	Professional services *in re* Regina *vs.* Birty	122 15	
			264 04
Beauchemin, A. O. T.	Professional services *in re* Regina *vs.* Dumaine		20 00
Stratton, W. C.	Legal expenses *in re* Regina *vs.* Jackson, Strathroy, including expenses of W. Henderson and W. C. Stratton for attending trial	77 00	
do	To pay H. Strathy, professional services *in re* Regina *vs.* Robert Cooper	71 95	
			148 95
McLeod, E., Q.C	Professional services *in re* Regina *vs.* J. B. Robinson		36 65
Borden, Ritchie, Parker & Chisholm	Professional services and law costs *in re* Carrell *vs.* Curless	704 83	
do do	Professional services *in re* Regina *vs.* Jones	17 50	
		722 33	
	DEDUCT—Amount paid in by defendant *in re* Regina *vs.* Jones, Halifax, Seizure No. 61	150 42	
			571 91
Costigan, J. R.	Professional services *in re* Regina *vs.* Wilson		20 00
Casgrain, Angers & Lavery	do do Neil McNeil		145 64
Poupore, Telesphore	Taxed cost, defendant *in re* Poupore *vs.* Dugas and Watkins		62 85
McKay, James	Professional services *in re* H. J. Progna, Winnipeg, Seizure No. 30		25 00
	Total Law Costs		2,229 79

Appendix B.—No. 1.—Details of Excise Expenditure, 1890-91—*Continued.*

To whom Paid.	Place of Residence.	Service.	Amounts Paid.	Total Amount Paid.
		Commission to Customs Officers.	$ cts.	$ cts.
Cameron, A. McK.	Meaford, Ont.	From 1st July, 1889, to 30th June, 1890.	150 00	
McGuire, F. J.	Trenton, Ont.	do do	250 00	
Elliott, Geo M.	Napanee, Ont.	do do	250 00	
Neilson, Geo. E.	Arnprior, Ont.	23rd Oct. to 23rd Nov., 1890.	19 12	
Pile, T. G.	Deseronto, Ont.	1st July, 1889, to 30th June, 1890.	150 00	
Hogg, W. A.	Collingwood, Ont.	do do	250 00	
Ormston, Jno	Gananoque, Ont.	do do	200 00	
Plummer, H.	Sault Ste. Marie, O.	do do	150 00	
Williamson, A. W.	Kincardine, Ont.	do do	99 78	
Beauchesne, P. C.	Paspebiac, Que.	do do	137 05	
O'Brien, W. J.	Bathurst, N.B.	1st May, 1889, to do	10 80	
Park, W. A.	Newcastle, N.B.	do do	200 00	
Binney, J. W.	Moncton, N.B.	1st July, 1889, to do	200 00	
Wallace, G. H.	Sussex, N.B	do do	98 03	
Street, A. F.	Fredericton, N.B.	do do	250 00	
Wilson, W. C.	Sackville, N.B.	do do	114 09	
Robidoux, Ferd.	Shediac, N.B.	do do	33 01	
Gove, C. M.	St. Andrews, N.B.	do do	200 00	
Boyd, A.	Antigonish, N.S.	do do	101 12	
Jones, Normand B.	Waymouth, N.S.	do do	99 58	
Ratchford, C. E.	Amherst, N.S.	do do	250 00	
Blair, H. C.	Truro, N.S.	do do	250 00	
Hamilton, A. G.	North Sydney, N.S	do do	150 00	
Hesson, F. A.	Brandon, Man	During month of October, 1889.	25 00	
Clute, Jno. S.	New Westminster, B.C.	From 1st July, 1889, to 30th June, 1890.	150 00	
Innstall, G. C.	Revelstoke, B.C.	do do	89 20	
Hussey, F.	Kamloops, B.C.	do do	200 00	
		Total Commission to Customs Officers		4,076 78
		Commission on Tobacco Stamps.		
Ferland, Ed.	St. Alexis, Que.	Allowance of 5 p. c. on sale of stamps.	1 94	
Desroches, D	St. Janvier, Que.	do do	12 54	
Charland, J. A.	St. Alexis, Que.	do do	41 66	
Piquette, Ludger.	do	do do	62 23	
		Total Commission on sale of Canada Twist Stamps.		118 37
		Duty-Pay.		
Caven, Wm.	From 1st January	to 31st December, 1890.	200 00	
Millier, E.	do	do	150 00	
Cameron, D. M.	do	do	200 00	
Iler, B.	do	do	200 00	
Dudley, W. H.	do	do	200 00	
Dawson, W.	do	do	150 00	
Quinn, J. D.	do	do	100 00	
McDonald, J. A.	do	do	100 00	
O'Leary, T. J.	do	do	100 00	
Flynn, D.	do	do	100 00	
Reddan, J.	do	do	100 00	
Goodman, A. W.	do	do	100 00	
Brennan, J.	do	do	100 00	
Falconer, J. E.	do	do	100 00	
Cahill, J. W.	do	do	100 00	
Allen, G. A.	do	do	100 00	

APPENDIX B.—No. 1.—Details of Excise Expenditure, 1890–91—*Continued.*

To whom Paid.	Service.	Superannuation Fees.	Amounts Paid.	Total Amount Paid.
			$ cts.	$ cts.
	Duty-Pay—Concluded.			
Weir, J	From 1st January to 31st December, 1890		100 00	
Keogh, P. M	do do		100 00	
Crotty, J	do do		100 00	
Crowe, W	do do		125 00	
Mason, F	do do		125 00	
Johnston, G. E	do do		100 00	
Keeler, G. H	do do		100 00	
Bouteiller, G	do do		100 00	
Howie, A	do do		150 00	
Gow, J. E	do do		100 00	
Bish, P	do do		150 00	
Donaghy, W	do do		100 00	
Baby, W. A. D	do do		150 00	
Spereman, J	do do		100 00	
Tompkins, P	do do		150 00	
Coleman, C	11th February do		88 90	
Jamieson, R. C	12th May to 30th June, 1890		13 33	
Cox, J. E	1st January to 11th April, and from 15th to 31st December, 1890		47 92	
Henwood, G	1st January to 1st October, 1890		75 00	
Sullivan, L. D	do 23rd April, 1890		31 39	
Sinon, E. H	14th do 31st December, 1890		96 38	
Gerald, W. H	1st do 1st October, 1890		137 50	
Davis, James	6th March to 31st December, 1890		81 94	
Craig, James	1st January to 30th June, 1890		50 00	
Conway, B. J	do 31st December, 1890		75 00	
Craig, Jos	1st July do		75 00	
Marçon, T. G	10th May do		63 89	
Gerald, C	1st January do		200 00	
	Total Duty-Pay			4,886 25
	Grand Total			355,285 44
	Printing		5,171 84	
	Stationery		1,241 29	
	Lithographing, engraving, &c		467 50	
				6,880 63
		$ cts.		
	Preventive Service—			
	Salaries	78 13	4,292 28	
	Contingencies	....	7,520 16	
				11,812 44
	Authorized disbursements (less superannuation)			373,978 51
ADD—Balances due to Collectors, &c., 1st July, 1890			49 08	
do by do 30th June, 1891			493 98	
				543 06
				374,521 57

APPENDIX B.—No. 1.—Details of Excise Expenditure, 1890—91—*Continued.*

Service.	Amounts Paid.	Total Amount Paid.
	$ cts.	$ cts.
LESS—Balances due by Collectors, &c., 1st July, 1890.	468 98	
do to do 30th June, 1891	49 08	
		518 06
Actual disbursements agreeing with Statement No. 4, page 10	.. ..	374,003 51

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

APPENDIX B.—*Continued.*

No. 2.—DETAILS of Fees paid to Cullers, for the Fiscal Year ended 30th June, 1891.

Office.	Department.	Names of Cullers.	Amounts Paid.	Total.	Grand Total.
			$ cts.	$ cts.	$ cts.
QUEBEC	Square Timber	Dorval, George	700 00		
		Kelly, Edward	700 00		
		Frederick, A.	700 00		
		McKendry, D.	700 00		
		O'Brien, M	700 00		
		Bergeron, Jos	700 00		
		McPeak, Wm	700 00		
		Kelly, Michael	625 00	5,525 00	
	Deals, &c.	Malone, Thomas, jun.		700 00	
	Staves	Ferland, Pierre		604 16	
		Total, Quebec			6,829 16
MONTREAL, LACHINE AND SOREL	General Cullers	Cusson, François	587 82		
		Barsolo, Edward	587 81		
		Total, Montreal, Lachine and Sorel			1,175 63
		Total Fees paid to Cullers			8,004 79

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

APPENDIX B—*Continued.*

DETAILS of Cullers' Expenditure, for the Fiscal Year ended 30th June, 1891.

Office.	Names.	Nature of Service.	Deduction for Superannuation.	Amounts Paid.	Total.	Grand Total.
		Salaries.	$ cts.	$ cts.	$ cts.	$ cts.
QUEBEC	Patton, James	Supervisor of Cullers for the year	36 00	1,764 00		
	Gowen, E	Cashier and Accountant for the year	19 96	980 04		
	Power, R	Chief Specification Clerk do	13 96	686 04		
	Whelan, W. F	Specification Clerk do	13 96	686 04		
	DeMartigny, C. P. L	do do	13 96	686 04		
	Gallagher, F	do do	13 96	686 04		
	Bell Rives, C	do do	6 88	543 12		
	Harney, T	Messenger for the year	4 96	395 04		
		Total, Quebec Salaries	123 64	....	6,426 36	
		Contingencies.				
QUEBEC	Foley, Mary	Charwoman	....	96 00		
	Rogers, A	Night watchman	....	35 00		
	Gowen, E	Petty expenses	....	68 47		
	Kelly, John	Carpenter's work	....	32 64		
	Leonard, B	Sign board, &c	....	13 00		
	Bell Telephone Co	Rent of telephone	....	40 00		
	Hearn, John	Rent of office	....	1,040 00		
	Belland, J. E., & Co	Extra services	....	370 93		
	Boyle, P	Subscription to "The Irish Canadian"	....	1 00		
	Foote, John J	do "Chronicle"	....	6 00		
	"Gazette" Printing Co	do "Gazette"	....	6 00		
	Foote, S. B	do "Shareholder"	....	2 00		
	Boulanger & Marcotte	do Directory	....	4 00		
	Foote, John J	Printing of circulars for timber	....	1 20		
	Webster & Co., J. M	Coal and wood	....	106 22		
	Rancour, N	Ice	....	15 00		
	Quebec Corporation	Taxes	....	392 81		
	Arnold, T	Cartage of ashes	....	28 25		
	Holmes, Margaret	Washing windows, &c	....	60 00		

APPENDIX B.—No. 3.—DETAILS of Cullers' Expenditure, for the Fiscal Year ended 30th June, 1891—*Continued.*

Office.	Names.	Nature of Service.	Deduction for Superannuation.	Amounts Paid.	Total.	Grand Total.
		Contingencies—Concluded.	$ cts.	$ cts.	$ cts.	$ cts.
QUEBEC	Madden & Ellis	Coal		7 70		
	Turgeon, P. L	Sundries		9 35		
	Maguire, J	Plumbing		59 70		
	McManus & Ryan	Removing snow from roof		7 00		
	Tierney & Donnelly	do do		4 00		
	McMannus & Donnelly	do do		4 00		
	Kane, J. R.	Sundries		6 35		
	Miller & Son, M	do		2 59		
	Quebec Post Office	Rent of post office box		6 00		
	Broomer, George	Sawing and splitting wood		5 00		
		Total, Quebec Contingencies			2,430 21	
		Cullers' Expenses.				
	McKendry, D	Cullers' expenses		447 67		
	Kelly, M	do		78 75		
	O'Brien, M	do		248 19		
	Bergeron, Jos.	do		259 30		
	Kelly, E	do		217 46		
	McPeak, W	do		223 94		
	Frederick, A	do		184 81		
	Dorval, Geo	do		136 09		
	Ferland, P	do		3 15		
		Total, Cullers' Expenses			1,799 36	
		Total, Quebec Expenditure				10,655 93
		Paid to Retired Cullers.				
	Jobin, Jacques	Superannuation		200 00		
	Jeunest, P	do		50 00		
	Morrissette, J	do		200 00		
	Lockquell, L	do		200 00		

	Demers, L.	do		200 00		
	Verrault, Ed.	do		200 00		
	Murphy, M.	do		200 00		
	Feore, J. F.	do		200 00		
	Dorval, P.	do		200 00		
	Walsh, W	do		200 00		
	Myrand, L.	do		200 00		
	Hamel, A. F.	do		200 00		
	Gibbon, M.	do		200 00		
	Villeneuve, J.	do		200 00		
	Couture, C.	do		16 68		
	Bédard, Jér.	do		200 00		
	Thompson, F. X.	do		200 00		
	McNaughton, J.	do		200 00		
	Beaupré, N.	do		200 00		
	Frenette, J.	do		200 00		
	Malone, J. C.	do		200 00		
	Brousseau, J. B.	do		200 00		
	Duggan, E.	do		200 00		
	Noël, Elie	do		200 00		
	Gilchen, T.	do		200 00		
	McInenly, T.	do		200 00		
	Lockquell, A. H.	do		200 00		
	Laflamme, Jos.	do		200 00		
	Malone, T., sen.	do		200 00		
	Patry, T.	do		200 00		
	Cauchy, C.	do		200 00		
	Lynch, J.	do		200 00		
	Vachon, J. B.	do		200 00		
	Murphy, T.	do		200 00		
	Demers, F. X.	do		200 00		
	Munro, W.	do		200 00		
	McCormick, J.	do		200 00		
	Duggan, W.	do		200 00		
	Clark, T.	do		200 00		
	Morency, D	do		200 00		
		Total paid to Retired Cullers				7,666 68
		Salaries.				
MONTREAL, LACHINE AND SOREL.	Daveluy, George	Deputy Supervisor of Cullers for the year	18 00	882 00		
		Total Salaries.			882 00	

APPENDIX B.—No. 3.—Details of Cullers' Expenditure, for the Fiscal Year ended 30th June, 1891—*Concluded.*

Office.	Names.	Nature of Service.	Deduction for Superannuation.	Amounts Paid.	Total.	Grand Total.
		Contingencies.	$ cts.	$ cts.	$ cts.	$ cts.
	Seath, David	Rent of office for year		99 96		
	Lanctot, Mrs	Charwoman do		36 00		
	Daveluy, J. P	Specification Clerk		34 50		
	Desaulniers, E	do		31 50		
	Lovell, John	Almanac with Montreal addresses		3 00		
	Montreal Post Office	P. O. drawer		4 00		
	Sundries	Stamps and telegrams		2 75		
		Total Contingencies			211 71	
		Total, Montreal, Lachine and Sorel				1,093 71
		Salaries.				
THREE RIVERS	Malone, T	Deputy Supervisor of Cullers for the year	3 72	296 28		
	Gouin, N	Specification Clerk	6 32	493 68		
		Total Salaries	10 04		789 96	
		Contingencies.				
	Dominion Express Co	Freight charges		0 25		
	Post Office	Rent of drawer		2 00		
	Foote, J. J	Subscription to Quebec "Chronicle"		6 00		
	Malone, T	Travelling expenses		36 25		
		Total Contingencies			44 50	
		Total, Three Rivers				834 46
		Grand Total				28,255 57
		Printing			140 05	
		Stationery			52 45	
						192 50

		Authorized disbursements (less superannuation)				28,448 07
		Add—Balances due by Supervisors, 30th June, 1891				75 00
						28,523 07
		Less—Balances due by Supervisors, 1st July, 1890				75 00
		Actual disbursements, agreeing with Statement No. 8, page 15				28,448 07

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

APPENDIX B.—*Continued.*

No. 4.—DISTRIBUTION of Seizures, for the Year ended 30th June, 1891.

Division.	To whom Paid.	Service.	Amounts Paid.	Total Amount Paid.
		Ontario.	$ cts.	$ cts.
Hamilton......	Officer Wm. Amor.	To pay informer penalty *in re* John White........	....	25 00
Kingston.. . .	do Wm. McCoy.....	For his proportion of Seizure No. 73..	....	0 15
Ottawa........	do C. Curless........	do do 93..	6 92	
		do do 96..	6 39	13 31
	do C. Curless........	To pay informer penalty in Seiz. No. 93.	5 00	
		do do 95.	5 00	
		do do 96.	5 00	15 00
	do J. A. Gravelle....	For his proportion of Seizure No. 94..	5 67	
		do do 97..	0 50	6 17
	do M. Battle.......	To pay informer penalty in Seiz. No. 94.	5 00	
		do do 97.	5 00	
		do do 98.	5 00	15 00
	do W. G. Bédard....	For his proportion of Seizure No. 97..	....	0 50
Peterboro'.....	do R. Howden	do do 1..	....	2 00
St. Catherines.	do C. A. Hesson....	To pay informer penalty in Seiz. No. 12.	50 00	
		do do 13.	100 00	150 00
	do J. McClive	For his proportion of Seizure No. 12..	25 00	
		do do 13..	50 00	75 00
Toronto.......	do G. Taylor..	do do 294..	0 29	
		do do 295..	1 92	2 21
	do J. B. Blair	To pay informer penalty in Seiz. No. 294	0 29	
		do do 295	1 92	2 21
	do J. M. McClive...	For his proportion of Seizure No. 296.	....	7 06
	do W. C. Stratton...	To pay informer penalty in Seiz. No. 297	....	100 00
	do H. N. Helliwell..	For his proportion of Seizure No. 198.	5 00	
		do do 200.	5 65	10 65
	do G. T. Evans.. ...	do do 198.	5 00	
		do do 200.	5 65	10 65
		Quebec.		
Joliette........	Officer C. Curless..	For his proportion of Seizure No. 92..	2 50	
		do do 93..	2 35	
		do do 94..	2 35	
		do do 95..	2 50	
		do do 96..	12 50	22 20
Joliette........	Officer C. Curless	To pay informer penalty in Seiz. No. 92.	5 00	
		do do 93..	5 00	
		do do 94..	5 00	
		do do 95..	5 00	
		do do 96..	25 00	45 00
	do J. A. Watkins...	For his proportion of Seizure No. 92..	2 50	
		do do 93..	2 35	
		do do 94..	2 35	
		do do 95..	2 50	
		do do 96..	12 50	22 20
	do R. M. Leprohon..	To pay informer penalty in Seiz. No. 102	....	5 00

APPENDIX B.—No. 4.—Distribution of Seizures, 1890-91—*Continued.*

Division.	To whom Paid.	Service.	Amount Paid.		Totals.	
		Quebec—Continued.	$	cts.	$	cts.
Montreal	Officer J. P. F. Tansey..	For his proportion of Seizure No. 619.	....		4	60
	Estate of J. P. F. Tansey.	For late J. P. F. Tansey, his proportion of Seizure No. 549..........	....	..	1	80
	Officer J. A. Watkins...	For his proportion of Seizure No. 549..	1	80		
		do do 632 .	5	00		
					6	80
	do C. Curless...... .	For his proportion of Seizures Nos. 608, 609, 610, 614, 616, 617, 619 and 626............................	3	77		
		For his proportion of Seizure No. 620..	20	38		
		do do 622..	5	52		
		do do 623..	4	90		
		do do 625..	8	70		
		do do 627..	9	50		
		do do 628..	4	25		
		do do 629..	5	00		
		do do 630..	5	40		
		do do 631..	15	25		
					82	67
	do C. Curless........	To pay informer penalty in Seiz. No. 620	15	00		
		do do 622..	5	00		
		do do 623..	5	00		
		do do 625..	5	00		
		do do 628..	5	00		
		do do 630..	5	00		
		do do 645..	5	00		
		do do 646..	10	00		
		do do 648..	5	00		
					60	00
	do J. J. Coleman....	For his proportion of Seizure No. 549..	13	65		
		For his proportion of Seizure Nos. 607 and 617........	97	32		
					110	97
	do J. C Baby.. .	do do ..	....		97	33
	do J. L. Vincent....	To pay informer penalty in Seiz. No. 619	5	00		
		do do 621..	25	00		
		do do 632..	5	00		
					35	00
	do H. J. S. Dixon...	For his proportion of Seizure No. 621.	....		13	66
Quebec........	do B. Iler...........	For his proportion of Seizure No. 229..	23	64		
		do do 230..	25	09		
					48	73
	do J. A. Gravelle.....	do do 229..	23	63		
		do do 230..	25	09		
					48	72
	do C. Curless.........	do do 246..	2	50		
		do do 247..	2	50		
					5	00
	do C. Curless.........	To pay informer penalty in Seiz. No. 246	5	00		
		do do 247..	5	00		
					10	00
	do J. A. Watkins....	For his proportion of Seizure No. 246..	2	50		
		do do 247..	2	50		
					5	00
	do O. Bourget..	do do 261..	....		6	80
	do G. Bourassa.......	do do 261..	6	80		
		do do 264..	6	85		
					13	65
	do D. M. Cameron...	do do 263..	0	45		
		do do 266..	0	80		
					1	25

APPENDIX B.—No. 4.—Distribution of Seizures, 1890-91—*Continued.*

Division.	To whom Paid.	Service.	Amounts Paid.	Total.
		Quebec—Con.	$ cts.	$ cts.
Sorel........	Officer C. Curless......	For his proportion of Seizure No. 45..	5 78	
		do do 47..	10 05	
				15 83
St. John's......	do C. Curless........	do do 17..	24 84	
		do do 18..	24 20	
				49 04
	do C. Curless.. ..	To pay informer penalty in Seiz. No. 17.	25 00	
		do do 18..	25 00	
				50 00
Terrebonne....	do A. Bisset	For his proportion of Seizure No. 27..	....	10 00
		New Brunswick.		
St. John......	Officer J. C. Ferguson...	For his proportion of Seizure No. 40..	....	5 00
	do James Hamilton..	do do 40..	....	5 00
	do J. Bogue	do do 41..	....	25 00
	do T. Burke........	To pay informer penalty in Seiz. No. 41.	....	25 00
		Nova Scotia.		
Cape Breton...	Officer C. Curless........	For his proportion of Seizure No. 10..	....	8 18
		Manitoba.		
Winnipeg.. ..	Officer C. Curless........	For his proportion of Seizure No. 27..	24 66	
		do do 28..	5 00	
				29 66
	do C. Curless... ..	To pay informer penalty in Seiz. No. 27.	75 00	
		do do 28..	5 00	
				80 00
	do T. S. Gosnell...	For his proportion of Seizure No. 27..	....	24 67
		British Columbia.		
Victoria.......	Officer C. Curless........	For his proportion of Seizure No. 15..	....	95 50
	do C. Curless........	To pay informer penalty in Seiz. No. 15.	....	50 00
		Weights and Measures Seizure.		
Winnipeg......	Officer S. Hunter......	Half penalty collected from H. Goldslamb, Agnes Morris, D. H. Coates in Seizure No. 12..	12 00	
	do J. G. Stone...	Half penalty collected from N. Desmarco in Seizure No. 12...........	4 00	
				16 00
		Grand Total...	....	1,570 17

APPENDIX B.—No. 4.—Distribution of Seizures, 1890-91.—*Concluded.*

RECAPITULATION.

Ontario	$ 434 91
Quebec	771 25
New Brunswick	60 00
Nova Scotia	8 18
Manitoba	131 33
British Columbia	145 50
Total	$1,551 17

Weights and Measures.

Manitoba	$ 16 00

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

APPENDIX B—*Continued.*

No. 5.—Details of Sundry Minor Expenditures, for the Fiscal Year ended 30th June, 1891.

To whom Paid.	Service.	Amounts Paid.	Total.
	Minor Public Works.	$ cts.	$ cts.
British American Bank Note Co....	Law stamps	14 75	
The Citizen P. & P. Co..	Advertising *re* Ottawa and Hull Ferry	9 50	
Le Spectateur	do do	9 75	
Le Canada	do do	9 75	
The Weekly Dispatch..	do do	8 58	
Hesson, C. A.	Expenses in connection with the Buffalo and Navy Island Ferry	4 60	
LaRue, Geo.	Cab-hire in *re* Bonner's Rents	2 00	
			58 93
	Hydraulic Rents.		
O'Connor, D.	Professional services *re* Hydraulic Rents		3,009 28
	Inspection of Staples.		
Hadrill, Geo., Secretary of Montreal Board of Trade	To meet expenses in connection with meeting of Board of Examiners	891 63	
Bell, Chas. N., Secretary of Winnipeg Board of Trade	To meet expenses in connection with the fixing of grain standards by the Western Grain Board	483 92	
Wills, A. Edgar, Secretary of Toronto Board of Trade	To meet expenses in connection with the meeting of Board of Examiners to determine the grain standards	449 14	
Bellemare, R.	Express charges in connection with flour samples sent to various inspection divisions	57 60	
Costigan, H. A...	Express charges on flour samples to Winnipeg	45 50	
The Leader Co.	Advertising in *re* examination of candidates for Raw Hides and Leather inspection	13 62	
The Medicine Hat Times	do do do	7 84	
Mercier & Co	do do do	2 64	
		1,951 89	
	Less—Sale of old flour samples	24 92	
	Total	....	1,926 97

APPENDIX B.—No. 5.—Details of Sundry Minor Expenditures—*Continued.*

To whom Paid.	Service.	Deduction for Superannuation.	Amounts Paid.	Total.
	Adulteration of Food.	$ cts.	$ cts.	$ cts.
Macfarlane, Thos ...	Salary as Chief Analyst for the year.	40 00	1,960 00	
McGill, A.	do Assistant Analyst do	28 00	1,372 00	
Lefebvre, F. X.	do do do	24 00	1,176 00	
Babington, F. W.	do do do	20 00	980 00	
Casey, Thomas.	do Clerk in laboratory for the year...	18 00	882 00	
Watson, Jas.	do do do ..	15 00	735 00	
Webster, Thomas	do Food Inspector for July.	0 41	20 42	
Watson, Jas.	do do from Sept. 12, '90, to June, 30, '91..	3 18	157 31	
Kidd, Thomas.	do do for the year	4 00	196 00	
Costigan, J. J.	do do do	6 20	303 80	
Ferguson, J. C.	do do do	6 50	318 50	
Kelly, Edward.	do do do	6 00	294 00	
Code, A.	do do do	5 52	274 44	
	Total, Salaries.	176 81	....	8,669 47
	Contingencies.			
Macfarlane, Thos.. ..	Travelling and other expenses		814 79	
Watson, James.	do do		256 57	
Webster, Thomas	do do		123 62	
Ferguson, J. C.	do do		230 25	
Costigan, J. J.	do do		378 37	
Code, A.	do do		60 19	
Kelly, E.	do do		160 68	
Kidd, Thomas.	do do		225 66	
Simpson, A. S.	do do		2 00	2,252 13
Ellis, W. H..	Allowance under the Act for retaining fees...		200 00	
do	do do rent.		100 00	
do	do do materials used in analysis.		100 00	
do	Fees for analysis.		1,120 00	1,520 00
Edwards, J. B.	Allowance under the Act for retaining fees.		200 00	
do	do do rent..		100 00	
do	do do materials used in analysis....		100 00	
do	Fees for analysis.		1,000 00	1,400 00
Bowman, M.	Allowance under the Act for retaining fees.		200 00	
do	do do rent.		100 00	
do	do do materials used in analysis...		100 00	
do	Fees for analysis.		1,104 90	1,504 90
Best, W. F.	Allowance under the Act for retaining fees.		200 00	
do	do do rent.		100 00	
do	do do materials used in analysis		100 00	
do	Fees for analysis		285 90	685 90
Valade, F. X	Allowance under the Act for retaining fees....		200 00	
do	do do rent		100 00	
do	do do materials used in analysis		100 00	
do	Fees for analysis		717 80	1,117 80
Fiset, M.	Allowance under the Act for retaining fees		200 00	
do	do do rent		100 00	
do	do do materials used in analysis		100 00	
do	Fees for analysis.		848 00	1,248 00

Appendix B.—No. 5.—Details of Sundry Minor Expenditures, &c.—*Con.*

To whom Paid.	Service.	Amounts Paid.	Total.
	Contingencies—Concluded.	$ cts.	$ cts.
Kenrick, E. B	Allowance under the Act for retaining fees	200 00	
do	do do rent	100 00	
do	do do materials used in analysis	100 00	
do	Fees for analysis	1,190 00	1,590 00
Harrison, F	Allowance under the Act for retaining fees	100 00	
do	do do rent	50 00	
do	do do materials used in analysis	350 00	
do	Fees for analysis	364 00	864 00
Tourchot, A. L	3 months services in Laboratory		195 00
Macfarlane, A. C	312 days' services in Laboratory		312 00
Marsan, Rev. C. F.	Expenses in connection with Board of Examiners		125 45
Eimer & Amend	Chemicals and chemical apparatus for Laboratory		307 46
Lyman, Sons & Co	do do do		192 73
Whitehead, Mrs. J.	Cleaning instruments, sample bottles, &c.		162 75
Ramsay, J. G. & Co.	Photographic apparatus and materials for Laboratory		67 73
Esmonde, J. R.	Chemical apparatus and materials for Laboratory		80 03
Philip, Harris & Co	Chemical apparatus for Laboratory		120 67
Greiner, Johannes	do do		133 46
Gerhardt, C	do do		223.09
The "Citizen" Printing and Publishing Co	Advertising		75 00
Anthony, E. H. & T.	Chemical apparatus and materials for Laboratory		144 08
Archambault, R.	Petty expenses, freight charges, cartage, &c		236 42
Roche, H. G	Expenses in connection with removal of Mr. McGill's office		24 95
Girdwood, Mrs. F. M.	Expenses in connection with Board of Examiners (by G. P. Girdwood)		121 40
Dufresne & Mongenais.	Oil of cognac		48 75
Gooderham & Worts	Proof spirits for Laboratory		48 26
Arnold, Fenwick & Co.	Materials for Laboratory		30 85
Jonas, H. & Co	Essences for Laboratory		30 50
Butterworth & Co	Chemical apparatus for Laboratory		28 60
Wischer, E. R	1 pressure filter for Laboratory		14 00
Birkett, Thomas	Hardware		14 78
The Dundas Star.	Advertising		60 50
Gillespie & Co	Samples of liquor		10 76
The E. B. Eddy Manufacturing Co	Lumber supplied		7 50
McKinley & Northwood	Chemical apparatus for Laboratory		6 00
			23,674 92
	Less—Sale of instruments, chemicals, &c.		10 23
	Total		23,664 69
	Grand Total		28,659 87
	Add— Printing	558 08	
	Stationery	337 86	895 94
	Actual disbursements agreeing with Statement No. 12, page 17		29,555 81

E. MIALL,
Commissioner.

Inland Revenue Department, Ottawa, 17th August, 1891.

APPENDIX B—*Continued.*

No. 6.—DETAILS of Departmental Expenditure for the Year ended 30th June, 1891.

Name.	Rank.	Period.	Deduction for Superannuation.	Amounts Paid.	Total.
			$ cts.	$ cts.	$ cts.
Costigan, Hon. J.	Minister	For the year.	......	7,000 00	
Miall, E.	Commissioner	do	64 00	3,136 00	
Gerald, W. J.	Asst. Commissioner and Insp. of Tobacco Factories	do	56 00	2,744 00	
Robins, P. M.	Chief Accountant	do	48 00	2,352 00	
Himsworth, Wm.	Secretary	do	42 00	2,058 00	
Heron, Wm.	Statistical Clerk	do	36 00	1,764 00	
Campeau, F. R. E.	Assistant Accountant	do	36 00	1,764 00	
Valin, J. E.	Accounts Branch Clerk	do	35 00	1,715 00	
Hall, C. R.	do do	do	34 00	1,666 00	
Carter, Wm.	Shorthand Writer and Correspondence Branch Clerk	do	30 00	1,470 00	
Nettle, R.	Statistical Clerk	do	28 00	1,372 00	
Blatch, F. K.	Clerk of Supplies	do	28 00	1,372 00	
Walsh, M. F.	Clerk	do	28 00	1,372 00	
do	Private Secretary	do	....	600 00	
Lusignan, A.	Translator and Correspondence Branch Clerk	do	28 00	1,372 00	
Shaw, J. F.	Statistical Clerk	do	28 00	1,372 00	
Doyon, J. A.	Accounts Branch Clerk	do	28 00	1,372 00	
Brunel, J.	Weights and Measures Branch Clerk	do	27 00	1,323 00	
Byrnes, J.	Accounts Branch Clerk	do	25 00	1,225 00	
Quain, R.	do do	do	24 00	1,176 00	
McCarthy, J. P.	Correspondence Branch Clerk	do	22 00	1,078 00	
Fowler, Geo.	Weights and Measures Branch Clerk	do	17 48	857 48	
Brunel, Geo.	Accounts Branch Clerk	do	20 00	980 00	
Brown, J. F.	do do	do	20 00	980 00	
Dunne, J. P.	Stamps Branch Clerk	From 1st Jan., 1891	7 75	379 75	
Archambault, R.	Messenger	For the year.	6 25	493 75	
McCullough, A.	do	do	4 78	377 72	
	Total, Salaries		723 26	....	43,371 70
	Contingencies.				
Conway, Ambrose.	Extra Messenger, from 15th June to 27th August, 1890, at $25 per month			60 00	
Foran, J. K.	Extra Clerk in Accounts Branch, from 2nd July to 10th August, 1890, at $400 per annum			43 00	
St. Denis, Miss M. L.	Services as Copyist, 159 days at $400 per annum, at different intervals, from 14th July, 1890, to 26th May, 1891			175 01	
Plant, B. R.	Services 10 days, from 16th July to 25th July, 1890, at $2 per diem, and 8 days' travelling expenses at $3 per diem			44 00	
Bossé, H.	Services 9 days, from 26th July to 3rd August, 1890, at $2 per diem; and 13 days, from 4th to 16th August, 1890, including travelling expenses			68 75	
McLaughlin, Thos.	Extra Messenger, from 1st August to 18th November, 1890, at $400 per annum			122 13	
Hart, E.	Services as Acting Private Secretary to Minister 10 days, from 6th to 15th November, 1890, at $2 per diem			20 00	
do	Travelling expenses allowance			20 00	

APPENDIX B.—No. 6.—Details of Departmental Expenditures—*Continued.*

Name.	Service.	Amounts Paid.	Total.
	Contingencies—Continued.	$ cts.	$ cts.
Doyle, J. E.	Extra Messenger, from 17th November, 1890, to 15th June, 1891	233 31	
Moorhouse, Miss M. E.	Services as Copyist, 27 days, from 5th to 31st March, 1891	29 00	
Costigan, Hon. John	Travelling expenses	250 00	
Miall, E.	do	178 55	
Gerald, W. J.	do	229 20	
Gray, H. H.	do	53 25	
McCarthy, J. P.	do	56 70	
Shaw, J. F.	do	41 15	
Bliss, D. E. F	do	363 97	
Orangeville Post	Subscription	1 00	
Canadian Journal of Commerce	do	2 00	
Yarmouth Times.	do	4 00	
La Minerve	do	24 00	
The Enterprise, New Glasgow	do	1 50	
The Catholic Weekly Review	do	4 00	
Investigator	do	3 00	
The Courier	do	1 50	
The Exeter Advocate	do	1 00	
The Acton Free Press	do	1 50	
The Evening Gazette	do two copies	8 00	
The Brockville Times	do	4 00	
Trade Review	do	2 00	
The Sentinel	do two years	2 00	
Daily Times	do	4 00	
The Kingston News.	do	6 00	
Evening Telegram	do two years	3 00	
Le Nord	do do	2 00	
The Critic	do	1 50	
The Empire	do three copies	25 00	
The Herald	do	1 00	
The Dispatch	do	1 50	
The Citizen	do two copies	12 00	
Digby Courier	do	1 50	
Times (Prince Albert)	do	2 00	
Standard	do	1 00	
Daily Sun	do two years	12 00	
L'Etendard	do two copies for three years	40 00	
Sorel News	do	1 50	
Catholic Record	do	2 00	
The Colonist	do	4 50	
The Tribune	do	1 50	
The Review.	do	4 00	
The News	do	1 00	
Canadian Manufacturer's Publishing Co.	do	1 00	
The National	do	2 00	
The Guelph Herald	do	4 00	
The Review	do	1 50	
The World	do	4 00	
The Volksblatt	do	2 00	
The Brantford Courier	do	6 00	
The Gazette	do	12 00	
Le Spectateur	do two copies, two years	8 00	
Le Courrier du Canada	do	4 00	
The Morning Chronicle	do	6 00	
The Irish Canadian	do	1 00	

APPENDIX B.—No. 6.—Details of Departmental Expenditure—*Continued.*

Name.	Service.	Amounts Paid.	Total.
	Contingencies—Continued.	$ cts.	$ cts.
The Enterprise, Dutton.	Subscription	1 00	
The Shareholder	do	2 00	
The Globe	do	5 00	
The Guardian	do	2 00	
The Equity	do	1 00	
Free Press, Winnipeg	do	10 00	
Orillia Packet	do	1 00	
Le Prix Courant	do	1 50	
The Colonial Standard	do	1 00	
Mail, Brandon	do	2 00	
Le Manitoba	do	1 00	
The Planet	do	3 00	
La Patrie	do	3 00	
Daily Mercury	do	4 00	
Daily News	do	4 00	
Daily Telegraph	do	6 00	
Morning Herald	do	6 00	
L'Evénement	do	3 00	
The Journal	do two copies	10 00	
La Mère et l'Enfant	do	3 28	
The Mail, Toronto	do	5 00	
The Times	do	4 00	
The Index of Current Events	do	6 00	
The Canadian Gazette	do	4 38	
Commercial Financial Chronicle	do	10 20	
Wm. Ridgway	do to "Analyst"	18 63	
The Times	do	2 00	
Journal of the Society of Chemical Industry	do	6 09	
Free Press, Ottawa	do	5 00	
Le Moniteur Acadien	do	3 00	
La Vallée de l'Ottawa	do	4 00	
Le Canada	do	4 00	
Paris-Canada	do	2 71	
The Spectator	do	1 25	
The World	do	2 00	
Labour Advocate	do	1 50	
The Scandinavian Canadian	do	1 00	
The North-West Review	do	4 00	
Daily Examiner	do	5 00	
The Colchester Sun	do	6 00	
Intelligencer	do	6 00	
Daily Review	do	4 00	
Courrier de St. Hyacinthe	do	6 00	
Antigonish Casket	do	1 00	
Dublin Freeman	do	3 00	
Pilot Publishing Co	do	2 50	
Presbyterian Witness	do	1 50	
The Herald	do	8 33	
The Almonte Times	do	2 00	
The Dundas Star	do	1 00	
Le Sorelois	do	2 00	
Grip	do	2 00	
North Sydney Herald	do	2 00	
The Week	do	6 00	
The Dominion Oddfellow	do	1 87	
The Muskoka Herald	do	1 25	
Daily Witness	do	3 00	
Liverpool Times	do	3 00	
United Canada	do	2 00	
The Weston Times	do	2 00	
The Yarmouth Times	do	2 00	

APPENDIX B.—No. 6.—Details of Departmental Expenditure—*Concluded.*

Name.	Service.	Amounts Paid.	Total.
	Contingencies—Concluded.	$ cts.	$ cts.
The Western World	Subscription	2 00	
The Glengarrian	do	4 00	
Cardwell Sentinel	do	0 75	
The Leader	do	6 00	
Brampton Times	do	6 00	
Union Standard	do	1 00	
West Lorne Herald	do	1 00	
The Daily Herald	do	6 00	
Courrier des Provinces Maritimes	do	1 00	
Scientific American	do	1 44	
Hutton, J.	Cab-hire for Minister	193 75	
Postmaster	Postage	197 63	
G. N. W. Telegraph Co.	Telegraphing accounts for the year	542 87	
C. P. R. do	do do	479 85	
Western Union do	do from 10th Feb. to 9th Mar., 1891	48 87	
Bell Telephone Co	Moving telephone and telephoning	60 85	
Dept. of Public Printing and Stationery	Stationery	889 35	
do	Books	100 80	
do	do Forms, Parliamentary Publications	488 17	
do	Statutes of Canada	28 20	
Lamontagne, J. Bte	Repairs to clocks in offices	8 50	
Canadian Express Co.	Express charges for the year	35 89	
Dominion do	do do	39 90	
Donovan, John	Cartage for the year	84 75	
Storr, A. M.	do	4 40	
Templeman, J.	Cab-hire	3 75	
Lepine, M.	do	3 00	
Graham, K. D.	do	2 50	
Ricard, W.	do	4 75	
Laplante, E.	do	2 00	
Carroll, M.	do	2 50	
Walsh, M. F.	do	8 00	
Keegan, Mrs.	Washing towels	84 00	
Sproule, W. H.	Repairs to clocks	7 50	
Kavanagh Bros	Sundries for Department	6 25	
Bryson, Graham & Co.	do do	15 60	
Government Stationery Office	do do	4 50	
Casey, John	do do	6 58	
Ashfield, S., & Co.	do do	4 75	
Esmonde, J. R.	do do	5 00	
McLaughlin	Stamps	2 00	
The American Consul	Cost of official document	2 00	
Archambault, R.	Cartage and cab-hire	12 80	
do	Sundry petty expenses	76 95	
	Total Departmental Contingencies		5,941 41
	Authorized disbursements (less Superannuation)		49,313 11
	ADD—Balances due 30th June, 1891		16 66
			49,329 77
	LESS—Balances due 1st July, 1890		216 66
	Actual disbursements agreeing with Statement No. 17, page 38		49,113 11

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT, OTTAWA, 17th August, 1881.

APPENDIX B—*Continued.*

No. 7.—DETAILS of Weights and Measures Expenditure, for the Year ended 30th June, 1891.

To whom Paid.	Service.	Deduction for Superannuation.	Amounts Paid.	Total.
	Belleville.	$ cts.	$ cts.	$ cts.
Johnson, Wm.	Salary as Inspector for the year	19 96	980 04	
Slattery, Thos.	do Mechanical Assistant for the year.	13 96	686 04	
Irwin, Samuel	do Assist. Inspector do	12 00	588 00	
	Salaries	45 92	2,254 08	
	Contingencies		644 61	
				2,898 69
	Hamilton.			
McKenzie, T. H.	Salary as Inspector for the year	28 04	1,371 96	
McDonald, John	do Assist. Inspector for the year	16 04	783 96	
Marentette, A.	do do do	16 04	783 96	
Beattie, Thos.	do do do	12 00	588 00	
Magness, Robt.	do do do	12 00	588 00	
Laidman, R. M.	do do do	6 32	493 68	
Wheatley, A. E.	do do from the 7th February to the 30th June, 1891	1 94	153 94	
Fitzgerald, E. W	do Assist. Inspector from the 26th March to the 30th June, 1891	1 66	131 65	
	Salaries	94 04	4,895 15	
	Contingencies		1,376 82	
				6,271 97
	Kingston.			
Macdonald, J. A.	Salary as Inspector for the year	24 00	1,176 00	
Giffin, W. W.	do Assist. Inspector for the year	12 00	588 00	
Whitteker, W.	do do do	12 00	588 00	
	Salaries	48 00	2,352 00	
	Contingencies		959 88	
				3,311 88
	London.			
Egan, J.	Salary as Inspector for the year	24 00	1,176 00	
Coughlin, D.	do Mechanical Assistant for the year.	13 96	686 04	
Thomas, J. S.	do do do	12 00	588 00	
	Salaries	49 96	2,450 04	
	Contingencies		716 14	
				3,166 18
	Orillia.			
Bolster, Geo. I.	Salary as Inspector for the year	19 96	980 04	
Lyons, John	do Assist. Inspector for the year	16 04	783 96	
	Salaries	36 00	1,764 00	
	Contingencies		422 05	
				2,186 05
	Ottawa.			
Code, A.	Salary as Inspector for the year	24 00	1,176 00	
Cosgrove, John	do Assist. Inspector for the year	13 96	686 04	

APPENDIX B—No. 7.—Details of Weights and Measures Expenditure, for the Year ended 30th June, 1891—*Continued.*

To whom Paid.	Service.	Deductions for Superannuation.	Amounts Paid.	Total.
	Ottawa—Continued.	$ cts.	$ cts.	$ cts.
Gorman, M.	Salary as Asst. Inspector for the year	12 00	588 00	
Lynch, P.	do do do	6 32	493 68	
	Salaries	56 28	2,943 72	
	Contingencies	....	859 64	
				3,803 36
	Toronto.			
Piper, H.	Salary as Inspector for the year	24 00	1,176 00	
Milligan, R. J.	do Assist. Inspector for the year	15 00	735 00	
Kinnee, D.	do do do	13 96	686 04	
Wright, R. J.	do do do	13 96	686 04	
	Salaries	66 92	3,283 08	
	Contingencies	....	1,018 53	
				4,301 61
	Windsor.			
Hayward, W. J.	Salary as Inspector for the year	24 00	1,176 00	
Hughes, R. A.	do Assist. Inspector for the year	12 00	588 00	
	Salaries	36 00	1,764 00	
	Contingencies	....	1,095 76	
				2,859 76
	Montreal.			
Chalut, J. O.	Salary as Inspector for the year	30 00	1,470 00	
Daoust, J. A.	do Assist. Inspector for the year	16 04	783 96	
Dorion, G. T.	do do do	16 04	783 96	
Dillon, S.	do do do	13 96	686 04	
Richard, J. U.	do do do	12 00	588 00	
Baker, J. S.	do do do	12 00	588 00	
Tomlinson, W. M.	do do do	6 32	493 68	
Urquhart, J. R.	do do from 1st July, 1890, to 5th June, 1891	14 85	729 52	
Gervais, S.	do Assist. Inspector from 6th to 30th June, 1891	0 88	43 56	
Desrivières, F. L.	do Assist. Inspector from 1st July, 1890, to 31st January, 1891	7 00	343 00	
	Salaries	129 09	6,509 72	
	Contingencies	....	1,077 19	
				7,586 91
	Quebec.			
Bourassa, P. E.	Salary as Inspector for the year	19 96	980 04	
Kelley, M. J.	do Assist. Inspector for the year	13 96	686 04	
Adams, W. C.	do do do	6 32	493 68	
Chabot, F. X.	do do do	6 32	493 68	
Petit, J. B.	do do do	4 40	345 60	
Simard, H.	do do from 1st July, 1890, to 28th Feb., 1891	8 00	392 00	
Moreau, A.	do Caretaker for the year	1 72	203 64	
	Salaries	60 68	3,594 68	
	Contingencies	....	736 97	
				4,331 65

APPENDIX B—No. 7.—Details of Weights and Measures Expenditure, for the Year ended 30th June, 1891—*Continued.*

To whom Paid.	Service.	Deductions for Superannuation.	Amounts Paid.	Total.
	Three Rivers.	$ cts.	$ cts.	$ cts.
Olivier, J. A.	Salary as Inspector for the year	19 96	980 04	
Provost, J. J.	do Assist. Inspector for the year	13 96	686 04	
Bruneau, P. C. A	do do do	6 94	493 06	
	Salaries	40 86	2,159 14	
	Contingencies		286 17	
				2,445 31
	Fredericton.			
Freeze, E. C.	Salary as Inspector for the year	19 96	980 04	
Bois, Geo. A.	do Assist. Inspector for the year	12 00	588 00	
	Salaries	31 96	1,568 04	
	Contingencies		169 86	
				1,737 90
	King's.			
Scovil, W. B.	Salary as Inspector for the year	16 04	783 96	
Richard, D.	do Assist. Inspector for the year	12 00	588 00	
	Salaries	28 04	1,371 96	
	Contingencies		295 47	
				1,667 43
	St. John.			
Wilmot, J. B.	Salary as Inspector for the year	24 00	1,176 00	
Cowan, E.	do Assist. Inspector for the year	12 00	588 00	
	Salaries	36 00	1,764 00	
	Contingencies		67 97	
				1,831 97
	Cape Breton.			
Tremaine, L. E.	Salary as Inspector for the year	16 00	784 00	
	Contingencies		243 36	
				1,027 36
	Halifax.			
Ryan, J. B.	Salary as Inspector for the year	19 96	980 04	
Kelly, Ed	do Assistant Inspector for the year	10 04	489 96	
	Salaries	30 00	1,470 00	
	Contingencies		547 46	
				2,017 46
	Pictou.			
McKay, John.	Salary as Inspector for the year	18 00	882 00	
Chisholm, J. J.	do Assistant Inspector for the year	6 32	493 68	
	Salaries	24 32	1,375 68	
	Contingencies		358 44	
				1,734 12

Appendix B—No. 7.—Details of Weights and Measures Expenditure, for the Year ended 30th June, 1891—*Continued.*

To whom Paid.	Service.	Deduction for Superannuation.	Amounts Paid.	Total.
	Yarmouth.	$ cts.	$ cts.	$ cts.
Allison, Chas.	Salary as Inspector for the year	20 00	980 00	
	Contingencies		54 80	
				1,034 80
	Charlottetown.			
Reddin, Jas.	Salary as Inspector for the year	24 00	1,176 00	
	Contingencies		385 18	
				1,561 18
	Winnipeg.			
Huggard, R. T.	Salary as Inspector for the year	24 00	1,176 00	
Cowley, W.	do Assistant Inspector for the year	15 00	735 00	
Costello, W.	do do	13 96	686 04	
Ross, H. E.	do do	12 00	588 00	
Paterson, A. C.	do do	12 00	588 00	
Russell, W. W.	do do	6 32	493 68	
Girdlestone, R. J. M.	do do	4 04	195 96	
Looby, John.	do as Assistant Inspector, from 11th March to 30th June, 1891	1 91	151 29	
	Salaries	89 23	4,613 97	
	Contingencies		677 68	
				5,291 65
	Victoria.			
Jones, R.	Salary as Inspector for the year	12 00	588 00	
Findley, H.	do Mechanical Assistant for the year.	12 00	588 00	
Leighton, W. K.	do Assistant Inspector, from 21st July, 1890, to 30th June, 1891	6 59	324 51	
	Salaries	30 59	1,500 51	
	Contingencies		648 80	
				2,149 31
	General.			
Johnstone, W. J.	Salary as Chief Inspector of Standards for the year	40 00	1,960 00	
	Contingencies		477 25	
				2,437 25
	Contingencies.			
District Inspector	Ontario Contingencies			24 40
do	Manitoba do			306 40

Appendix B.—No. 7.—Details of Weights and Measures Expenditure, for the Year ended 30th June, 1891—*Concluded.*

To whom Paid.	Service.	Amounts Paid.	Total.
		$ cts.	$ cts.
Burgess, Thos..........	365 days' service as Mechanical Asst., at $2 per day..	730 00	
Gaul, William.........	7 days' service in connection with Weights and Measures fixtures	7 67	
Higgins, Miss E. M....	Extra work, from June 13 to July 13, 1891..........	33 33	
Yarmouth Times.......	Advertising Weights and Measures notice.........	23 10	
Toronto World.	do do	78 00	
The Colonial Standard..	do do	18 48	
Evening Gazette.	do do regulations......	200 00	
United Canada.	do do notice	37 00	
The Canadian Agriculturist.................	do do	21 00	
The Enterprise.........	do do	29 04	
Miramichi Advance....	do do	8 82	
The Catholic Record...	do do	66 00	
The Progress	do do	36 30	
The North Sydney Herald...	do do	39 00	
Oertling, L...	Twelve portable kits......	1,615 73	
Diamond, W. Jeffers...	Law costs in connection with prosecution of H. Skulthrop of Port Hope.....	23 70	
Bennett, Robert........	To pay amount representing loss to him from having used, during two years, measures duly verified too large.	50 00	
Canadian Express Co...	Freight on goods from England.....	32 10	
Boswell, Mrs. Mary....	To pay in full claim for damages done to premises occupied by Weights and Measures Office.........	50 00	
Burrow, Stewart & Milne	Plating and buffing 12 scales..	33 00	
Hanna, W. J	Professional services *in re* McLean *vs.* Hayward, and Regina *vs.* Elliott.....	23 83	
Aikins, Culver & Co....	Professional service *in re* Regina *vs.* D. H. Coates....	10 00	
Walsh, M..	do do Foster..........	5 50	
Birkett, Thomas..	Hardware, &c.........	20 61	
Spragge, Chas. E.	To pay for 1 land chain (steel)............	7 50	
Drake, Jackson & Co...	Legal opinion *in re* Brown & White................	10 00	
The E. B. Eddy Manufacturing Co..........	To pay for lumber	31 25	
Borbridge, S. & H.	Leather buckles and straps for Weights and Measures kits..........	31 16	
Loudon, W. G.........	Services in connection with setting up and adjusting mural standards, testing of surveyors' tape lines and general services for standard branch during the year....	547 30	
Shaw, & Co., C. S......	To pay for oil.......	1 60	
Archambault, R.......	Petty expenses, &c...................	18 20	
			3,839 22
	Less—Received from sale of 1 surveyor's standard measure, 1 balance and 1 portable kit..... .	....	58 25
	Total, General Contingencies.....	....	3,780 97
	Grand Total....................	....	69,765 57
	Add—Printing....	576 37	
	Stationery..........................	914 39	
	Lithographing....	15 00	
			1,505 76
	Authorized disbursements (less superannuation), being actual disbursements agreeing with Statements Nos. 21 A and 21 B, pages 46 and 47....	... .	71,271 33

E. MIALL, *Commissioner.*

Inland Revenue Department,
Ottawa, 17th August, 1891.

APPENDIX B—*Continued.*

No. 8.—Details of Gas Inspection Expenditure, for the Year ended 30th June, 1891.

To whom Paid.	Service.	Deduction for Superannuation.	Amounts Paid.	Total.
	Barrie.	$ cts.	$ cts.	$ cts.
Shanacy, M.	Salary as Inspector, from 9th July, 1890, to 30th June, 1891	1 88	95 93	
	Contingencies		172 56	
				268 49
	Belleville.			
Johnson, W.	Salary as Inspector for the year	5 00	245 00	
	Contingencies		89 10	
				334 10
	Berlin.			
Lynes, K.	Salary as Inspector, from 12th September, 1890, to 30th June, 1891	1 54	78 64	
	Contingencies		247 06	
				325 70
	Brockville.			
Giffin, W. W.	Salary as Inspector for the year	2 00	98 00	
	Contingencies		7 00	
				105 00
	Cobourg.			
Bickle, J. W.	Salary as Inspector for the year	2 00	98 00	
	Contingencies		511 23	
				609 23
	Cornwall.			
Mulhern, M. M.	Salary as Inspector for the year	2 00	98 00	
	Contingencies		52 75	
				150 75
	Guelph.			
Broadfoot, S.	Salary as Inspector, from 12th September, 1890, to 30th June, 1891	1 54	78 64	
	Contingencies		6 30	
				84 94
	Hamilton.			
McPhie, D.	Salary as Inspector for the year	19 96	1,180 04	
Dennis, W. A.	do Asst. do do	1 96	98 04	
	Salaries	21 92	1,278 08	
	Contingencies		405 26	
				1,683 34
	Kingston.			
Burrows, W.	Salary as Inspector for the year	8 00	392 00	
	Contingencies		191 40	
				583 40

Appendix B.—No. 8.—Details of Gas Inspection Expenditure, for the Year ended 30th June, 1891.—*Continued.*

To whom Paid.	Service.	Deduction for Superannuation.	Amounts Paid.	Total.
	Listowel.	$ cts.	$ cts.	$ cts.
Hawkins, A. St. G. ...	Salary as Inspector for the year............	1 25	98 75	
	Contingencies....................	.....	62 85	
				161 60
	London.			
Williams, J............	Salary as Inspector for the year............	20 00	980 00	
	Contingencies....................	....	439 05	
				1,419 05
	Napanee.			
Elliott, Geo. M........	Salary as Inspector for the year.........	2 00	98 00	
	Contingencies....................	....	173 76	
				271 76
	Ottawa.			
Roche, H. G...........	Salary as Inspector for the year............	12 00	588 00	
	Contingencies....................	....	319 50	
				907 50
	Owen Sound.			
Graham, W. J.......	Salary as Inspector for the year.........	4 00	196 00	
	Contingencies....................	....	109 13	
				305 13
	Peterborough.			
Cahill, T................	Salary as Inspector for the year..........	4 00	196 00	
	Contingencies....................	....	92 95	
				288 95
	Stratford.			
Rennie, Geo...........	Salary as Inspector, from 9th July, 1890, to 30th June, 1891.....................	1 88	95 93	
	Contingencies....................	.....	31 67	
				127 60
	Sarnia.			
Hicks, W. H.........	Contingencies..............................	....	....	193 55
	Toronto.			
Johnstone, J. K.......	Salary as Inspector for the year............	24 00	1,176 00	
	Contingencies....................	....	81 91	
				1,257 91
	Montreal.			
Hartt, Wm............	Salary as Inspector for the year..........	24 00	1,176 00	
Aubin, A..............	do Assistant Inspector and Consulting Engineer for the Dominion.......	16 04	783 96	
	Salaries....................	40 04	1,959 96	
	Contingencies....................	....	212 74	
				2,172 70

APPENDIX B.—No. 8.—Details of Gas Inspection Expenditure, for the Year ended 30th June, 1891—*Continued.*

To whom Paid.	Service.	Deduction for Superannuation.	Amounts Paid.	Total.
	Quebec.	$ cts.	$ cts.	$ cts.
Levasseur, N	Salary as Inspector for the year.....	19 96	980 04	
Moreau, A.......... ..	do Caretaker do	1 72	203 64	
	Salaries..	21 68	1,183 68	
	Contingencies	......	157 91	
				1,341 59
	Sherbrooke.			
Pennoyer, H. J	Salary as Inspector for the year......... ..	2 00	98 00	
	Contingencies	....	7 35	
				105 35
	Sorel.			
Bruneau, P. C. A.....	Salary as Inspector, from 1st May to 30th June, 1891......................... .	0 66	....	32 66
	Three Rivers.			
Marchand, N.........	Salary as Inspector for the year...........	2 50	....	197 50
	Fredericton.			
Purdie, S. A	Salary as Inspector for the year............	2 50	....	197 50
	Moncton.			
Lawlor, R. A.... ..	Salary as Inspector for the year	6 00	294 00	
	Contingencies.......	.... ..	243 94	
				537 94
	St. John.			
Rowan, A.............	Salary as Inspector for the year....	20 00	980 00	
	Contingencies...........	....	166 65	
				1,146 65
	Halifax.			
Miller, A..............	Salary as Inspector for the year........ ...	24 00	1,176 00	
Munro, H. D........	do Asst. do do	1 96	98 04	
	Salaries..	25 96	1,274 04	
	Contingencies.......	....	863 32	
				2,137 36
	Charlottetown.			
Knight, Jos	Salary as Inspector for the year......	2 50	197 50	
	Contingencies	.... ..	26 50	
				224 00
	Winnipeg.			
Huggard, R. T	Salary as Inspector for the year	4 00	196 00	
	Contingencies.......................	....	130 40	
				326 40

APPENDIX B.—No. 8.—Details of Gas Inspection Expenditure, for the Year ended 30th June, 1891—*Concluded.*

To whom Paid.	Service.	Deduction for Superannuation.	Amounts Paid.	Total.
		$ cts.	$ cts.	$ cts.
	Victoria.			
Jones, R.	Salary as Inspector for the year	4 00	196 00	
	Contingencies		211 38	
				407 38
	General.			
Aubin, A.	Contingencies			14 66
	General Contingencies.			
Pritchard & Andrews	Rubber cement		2 35	
British American Bank Note Co.	Stamps		9 50	
The Goodyear Rubber Co	Washers and rubber rings, rubber tubing, &c.		64 57	
McPhie, L.	Special duty at Stratford, Sarnia and Windsor		23 00	
Lyman, Sons & Co.	Ammonia, &c.		15 50	
Wallace & Son	Gas meter provers, photometers, test meter, cabinet, &c.		989 12	
Hoodless, J., & Son	Test meter cabinets, &c.		82 50	
Wright, Alex., & Co.	To pay for 50 lbs. standard sperm candles and 25 doz. acetate of lead test books		59 74	
	Total General Contingencies			1,246 28
	Grand Total			19,265 97
	ADD—Printing		267 01	
	Stationery		153 88	
				420 89
	Authorized Disbursements (less Superannuation)			19,686 86
	ADD—Balances due by Inspectors, 30th June, 1891.			212 88
				19,899 74
	LESS—Balances due by Inspectors, 1st July, 1890.			412 88
	Actual Disbursements agreeing with Statement No. 22, page 49			19,486 86

E. MIALL,
Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 17th August, 1891.

APPENDIX B.—*Continued.*

No. 9.—List of Persons employed by the Inland Revenue Department on Salary, during the Year ended 30th June, 1891.

Name.	Service.						
	Inside.	Excise.	Cullers' Office.	Weights and Measures.	Gas.	Preventive.	Food Inspection.
Adams, J. S.		1					
Adams, Wm. C				1			
Alexander, Thos		1					
Allen, G. A		1					
Allison, Chas.				1			
Amor, Wm		1					
Archambault, R.	1						
Atherton, R.		1					
Aubin, A					1		
Babington, F. W.							1
Baby, J. C.		1					
Baby, Jos.		1					
Baby, W. A. D		1					
Baker, J. S.				1			
Barber, J. S.		1					
Barker, C.		1					
Barrett, J. K.		1					
Barrett, Thos. J.		1					
Battle, M.		1					
Bayard, Gilbert A.		1					
Beasley, R.		1					
Beasley, R. S.		1					
Beattie, Thos				1			
Beauchamp, J. P.		1					
Bédard, W. G.		1					
Bellemare, R.		1					
BelleRives, Chas			1				
Belyea, T. H.		1					
Bennett, Jas.		1					
Bickle, J. W.		1			1		
Bish, Philip		1					
Blair, J. B.		1					
Blatch, F. K.	1						
Blethem, C. W.		1					
Bois, G. A.				1			
Boivin, C. A.		1					
Bolster, G. I.				1			
Boomer, J. B.		1					
Borradaile, R.		1					
Boucher, O. N. E.		1					
Bourassa, G.		1					
Bourassa, P. E.				1			
Bourget, O.		1					
Bouteiller, G. A.		1					
Brennan, John		1					
Broadfoot, S.		1					
Brown, J. F.	1						
Brown, J. J.		1					
Browne, G. W.		1					
Brunel, G.	1						
Brunel, J	1						
Bruneau, P. C. A.				1			
Bulmer, Wm.		1					
Burk, T.		1					
Burrows, Wm.					1		
Byrnes, John	1						
Cahill, J. H.		1					
Cahill, J. W.		1					
Cahill, T.		1			1		

APPENDIX B.—No. 9.—LIST of Persons employed by the Inland Revenue Department, &c.—*Continued.*

NAME.	SERVICE.						
	Inside.	Excise.	Cullers' Office.	Weights and Measures.	Gas.	Preventive.	Food Inspection.
Cameron, D. M		1					
Campbell, G. J		1					
Campeau, F. R. E	1						
Camyré, J. N		1					
Carroll, D		1					
Carter, Wm	1						
Casey, Thomas							1
Caven, A		1					
Caven, W		1					
Caven, J. McD		1					
Chabot, F. X				1			
Chalut, J. O				1			
Chisholm, J. J				1			
Christie, W. J		1					
Clark, A. F		1					
Code, A				1			1
Code, Abraham		1					
Coleman, Chas		1					
Coleman, J. J		1					
Coles, F. H		1					
Conway, B. J		1					
Codd, Herbert J. S		1					
Cosgrove, John				1			
Cosgrove, J. J						1	
Costello, J. W				1			
Costigan, H. A		1					
Costigan, J. J		1					1
Coughlin, D				1			
Courtney, J. J		1					
Cowley, W				1			
Cowan, Edgar				1			
Cox, J. E		1					
Craig, Joseph		1					
Crawford, W. P		1					
Crotty, John		1					
Crowe, W		1					
Cullen, P		1					
Curless, C						1	
Daoust, J. A				1			
Daveluy, George			1				
Davis, James		1					
Davis, John		1					
Davis, T. G		1					
Dawson, W		1					
DeMartigny, C. P			1				
Dennis, W. A					1		
Desroches, David		1					
Devine, Felix M		1					
Dibblee, Wm		1					
Dick, J. W		1					
Dickson, C. T		1					
Dillon, S		1		1			
Dixon, H. G. S		1					
Dingman, N. J		1					
Dodd, John		1					
Dodds, E. W		1					
Donaghy, Wm		1					
Dorion, G. T				1			
Doyon, J. A	1						
Dowling, Thomas		1					
Dudley, W. H		1					

APPENDIX B.—No. 9.—LIST of Persons employed by the Inland Revenue Department, &c.—*Continued.*

Name.	Service.						
	Inside.	Excise.	Cullers' Office.	Weights and Measures.	Gas.	Preventive.	Food Inspection.
Duguay, Joseph		1					
Dumbrille, R. W		1					
Dumbrille, J		1					
Dumouchel, Léandre		1					
Dunlop, C		1					
Duplessis, C. Z		1					
Dustan, W. M.		1					
Earle, R. H		1					
Egan, James				1			
Egener, A		1					
Elliott, G. M					1		
Erb, A. A		1					
Evans, G. T.		1					
Fahey, Ed		1					
Fahey, Owen		1					
Falconer, Jas		1					
Ferguson, J		1					
Ferguson, John C		1					1
Finlay, Hugh				1			
Fiset, Arthur		1					
Flynn, D		1					
Forest, E. R		1					
Flynn, J. P		1					
Fortier, J. J. O		1					
Fowler, Geo	1						
Fox, Thomas		1					
Fox, J. D		1					
Fraser, G. J		1					
Freeze, E. C				1			
Gallagher, F			1				
Gatien, F		1					
Gerald, C		1					
Gerald, W. H		1					
Gerald, W. J	1						
Giffin, W. W				1	1		
Gill, Wm		1					
Girard, Iréné		1					
Girdlestone, R. J. M		1		1			
Godson, H		1					
Goodman, A. W		1					
Gorman, M				1			
Goron, D.		1					
Gosnell, T. S		1					
Gouin, N			1				
Gow, James		1					
Gow, J. E		1					
Gowen, Edmund			1				
Graham, W. J		1			1		
Graham, W. T		1					
Grant, H. H		1					
Greey, S		1					
Grimason, Thomas		1					
Hagerty, P		1					
Hall, C. R	1						
Hall, J. J		1					
Hamilton, W. L		1					
Hamilton, C. M		1					
Hanley, A		1					
Harney, Thos			1				
Hart, P. D.		1					

APPENDIX B.—No. 9.—LIST of Persons employed by the Inland Revenue Department, &c.—*Continued.*

NAME.	SERVICE.						
	Inside.	Excise.	Cullers' Office.	Weights and Measures.	Gas.	Preventive.	Food Inspection.
Hartt, Wm					1		
Harwood, R. U		1					
Hastie, Wm		1					
Hawkins, A. St. George					1		
Hawkins, W. L		1					
Hayward, W. J				1			
Hébert, C. D		1					
Helliwell, H. N		1					
Henderson, W		1					
Henry, J. M. B		1					
Henwood, Geo		1					
Heron, W. L	1						
Hesson, C. A		1					
Hicks, W. H		1					
Hill, A. M		1					
Himsworth, Wm	1						
Hobbs, G. N		1					
Howie, A		1					
Howdon, R		1					
Hudon, A		1					
Hughes, R. A				1			
Huggard, R. T				1	1		
Iler, B		1					
Ironside, G. A		1					
Irwin, Robert		1					
Irwin, Samuel				1			
James, T. C		1					
Jamieson, R. C		1					
Johnson, Wm				1	1		
Johnston, G. E		1					
Johnstone, J. K					1		
Johnstone, W. J				1			
Jones, Richard				1			
Jubenville, J. P		1					
Keeler, G. S		1					
Keilty, Thos		1					
Kellock, D		1					
Kelly, Edward				1			1
Kelly, M. J				1			
Kenning, J. H		1					
Keogh, P. M		1					
Kidd, Thomas						1	1
King, R. M		1					
Kinnee, Daniel				1			
Knight, Jos					1		
Knowlson, J. B		1					
Laidman, Richard H				1			
Lang, V		1					
Langlois (*dit* Traversy), F. X		1					
Laporte, Geo		1					
LaRue, Geo		1					
Lawlor, H		1					
Lawlor, R. A		1			1		
Lecours, H. T		1					
Lee, Edward		1					
Lefebvre, F. X							1
Leighton, W. R		1					
LeMoine, Jules		1					
LeMoine, J. M		1					
Lépine, Louis		1					

APPENDIX B.—No. 9.—LIST of Persons employed by the Inland Revenue Department, &c.—*Continued.*

Name.	Service.						
	Inside.	Excise.	Cullers' Office.	Weights and Measure.	Gas.	Preventive.	Food Inspection.
Leprohon, R. M		1					
Lett, F. P. A		1					
LeVasseur, N					1		
Logan, John		1					
Lusignan, A.	1						
Lynch, P				1			
Lynes, K		1					
Lyons, E		1					
Lyons, John				1			
Macdonald, A. B.		1					
Macdonald, D		1					
Macdonald, J. A				1			
Macfarlane, Thos							1
Mackay, G. W		1					
Mackay, J. H		1					
Malo, T		1					
Magness, Robert				1			
Malone, Thos			1				
Manning, J		1					
Marchand. N					1		
Marcon, jun., F. E		1					
Marentette, Alex				1			
Marshall, F		1					
Mason, F		1					
Mason, Jas		1					
Miall, E	1						
Miller, A					1		
Miller, J. E		1					
Miller, W. F.		1					
Millier, Elie		1					
Milligan, R. J				1			
Milliken, E.		1					
Moore, T		1					
Moore, Wm		1					
Moreau, Alf				1	1		
Morrow, John		1					
Mulhern, M. M		1			1		
Munro, H. D		1			1		
Murphy, F		1					
Murray, A. E		1					
Murray, David		1					
McAllister, A		1					
McCarthy, J. P	1						
McClanaghan, M		1					
McCloskey, J. R		1					
McCoy, Wm		1					
McCuaig, Aug. F		1					
McCullough, A	1						
McDonald, J.				1			
McDonald, J. A		1					
McDonald, M. A		1					
McGill, A							1
McIntyre, Donald		1					
McKay, John				1			
McKenzie, T. H				1			
McKimm, U. H		1					
McNamara, M		1					
McPherson, A. F		1					
McPhie, Donald					1		
McSween, James		1					

APPENDIX B.—No. 9.—LIST of Persons employed by the Inland Revenue Department, &c.—*Continued.*

NAME.	SERVICE.						
	Inside.	Excise.	Cullers' Office.	Weights and Measures.	Gas.	Preventive.	Food Inspection.
Nash, S. C		1					
Neelands, H.		1					
Nettle, R	1						
Nichols, J. T.		1					
Olivier, J. A.				1			
O'Brien, J. F		1					
O'Donnell, J.		1					
O'Leary, T. J		1					
Panneton, G. E		1					
Patton, Jas			1				
Patterson, A. C.				1			
Pennoyer, H. J		1			1		
Perkins, L. A.		1					
Perry, G. L		1					
Petit, J. B.				1			
Pinsonnault, Alfred		1					
Piper, H.				1			
Pole, C. W		1					
Powell, J. B.		1					
Power, R.			1				
Power, Thos. A		1					
Provost, J. J.				1			
Purdie, S. A.					1		
Quain, Redmond	1						
Quinn, J. D.		1					
Racicot, Chas. George		1					
Ramon, Pierre		1					
Reddan, C. J		1					
Reddin, James				1			
Reilly, John S.		1					
Renaud, A.		1					
Rennie, George		1			1		
Richard, D				1			
Richard, J. B. T.		1					
Richard, J. U.				1			
Robins, Paul M.	1						
Roche, H. G.					1		
Rogerson, J. M.		1					
Ross, H. E.				1			
Ross, S. F.		1					
Rouleau, J.		1					
Rowan, A.					1		
Rowland, E.		1					
Rowland, F.		1					
Russell, W. W				1			
Ryan, J. B				1			
Saucier, X.		1					
Schram, B.		1					
Scovil, W. B				1			
Scullion, J. W.		1					
Shanacy, M.		1			1		
Sexton, J		1					
Shaw, J. F.	1						
Simpson, A. F.		1					
Sinon, E. H.		1					
Slattery, R.		1					
Slattery, Thos.				1			
Smyth, B. B.		1					
Spereman, J. J.		1					
Spence, F. H.		1					
Spence, John		1					

Appendix B.—No. 9.—List of Persons employed by the Inland Revenue Department, &c.—*Concluded.*

Name.	Service.						
	Inside.	Excise.	Cullers' Office.	Weights and Measures.	Gas.	Preventive.	Food Inspection.
Standish, J. G.		1					
Stewart, Jas.		1					
Stratton, W. C.		1					
Ste. Marie, L. C. A.		1					
Sullivan, L. D.		1					
Taylor, G. W.		1					
Taylor, J. F.		1					
Till, T. M.		1					
Thomas, J. S.				1			
Thomas, Philip						1	
Thomlinson, W. H.				1			
Tompkins, P.		1					
Toupin, F. X. J. A.		1					
Tremaine, L. E.				1			
Urquhart, Jas.				1			
Valin, J. E.	1						
Verner, Francis		1					
Villeneuve, J.		1					
Vincent, J. L.		1					
Wainwright, F. G.		1					
Waller, J.		1					
Walsh, Daniel		1					
Walsh, M. F.	1						
Watson, James							1
Watkins, J. A.		1					
Westman, T.		1					
Weir, Jas.		1					
Weyms, C.		1					
Whelan, W. F.			1				
Whitteker, Wm				1			
Williams, Geo.		1					
Williams, J.					1		
Wilmot, J. B.				1			
Wilson, David		1					
Winter, A. W.		1					
Woodward, G. W.		1					
Wright, Robt.				1			
Yates, J. M.		1					
Total	24	273	11	67	29	4	11

APPENDIX B—*Concluded.*

No. 10.—List of Persons employed by the Inland Revenue Department on Salary, during a portion of the Year ended 30th June, 1891.

Name.	Period.	Service.				
		Excise.	Weights and Measures.	Gas.	Preventive.	Food Inspection.
Bell, James E.	From 1st Feb., 1891, to 30th June, 1891	1				
Bowman, Allan	do 8th Oct., 1890, to 30th June, 1891	1				
Boyle, P.	do 16th Sept., 1890, to 30th June, 1891	1				
Brabant, J. B. G. N.	do 1st Oct., 1890, to 30th June, 1891	1				
Bradley, Miss Carrie	do 15th Sept., 1890, to 30th June, 1891	1				
Brennan, D. J.	do 14th Feb., 1891, to 30th June, 1891	1				
Bruneau, Adolphe	do 1st May, 1891, to 30th June, 1891			1		
Campbell, J. McD.	do 1st July, 1890, to 31st May, 1891	1				
Chisholm, Noble	do 21st July, 1890, to 30th June, 1891	1				
Clark, James Alfred	do 24th April, 1891, to 30th June, 1891	1				
Colcleugh, J. W.	do 4th Nov., 1890, to 30th June, 1891	1				
Daveluy, J. P.	do 17th July, 1890, to 30th June, 1891	1				
Desrivières, F. L.	do 1st July, 1890, to 31st Jan., 1891		1			
Doyle, B. J.	do 5th Jan., 1891, to 30th June, 1891	1				
Dunne, J. P.	do 1st Jan., 1891, to 30th June, 1891	1				
Fraser, P.	do 1st Feb., 1891, to 30th June, 1891	1				
Fitzgerald, E. W.	do 26th Mar., 1891, to 30th June, 1891		1			
Flaherty, E. J. O.	do 12th Sept., 1890, to 30th June, 1891	1				
Gervais, Samuel	do 19th June, 1891, to 30th June, 1891		1			
Hamilton, T. C.	do 1st July, 1890, to 30th Sept., 1890	1				
Hasty, M. J.	do 21st Nov., 1890, to 30th June, 1891	1				
Hawkins, A. C.	do 13th Feb., 1891, to 30th June, 1891	1				
Howard, W. S.	do 23rd Sept., 1890, to 30th June, 1891	1				
Kelly, John F.	do 9th July, 1890, to 30th June, 1891				1	
Lane, T. M.	do 25th Mar., 1891, to 30th June, 1891	1				
Lawder, John	do 10th Feb., 1891, to 30th June, 1891	1				
Leighton, W. K.	do 21st July, 1890, to 30th June, 1891		1			
Looby, John	do 11th Mar., 1891, to 30th June, 1891		1			
Macdonald, A. D.	do 1st July, 1890, to 31st Aug., 1890	1				
Marion, Eugène	do 8th Jan., 1891, to 30th June, 1891	1				
Metcalf, W. F.	do 24th July, 1890, to 30th June, 1891	1				
Moore, J. N.	do 1st July, 1890, to 31st Aug., 1890	1				
O'Brien, C.	do 10th Feb., 1891, to 30th June, 1891	1				
Robson, James	do 1st July, 1890, to 31st Aug., 1890	1				
Simard, H.	do 1st July, 1890, to 28th Feb., 1891		1			
Tansey, J. P. F.	do 1st July, 1890, to 31st Mar., 1891	1				
Thomas, Robert	do 26th Jan., 1891, to 30th June, 1891	1				
Webster, Thomas	do 1st July, 1890, to 31st July, 1890	1				1
Wheatley, Alfred E.	do 9th March, 1891, to 30th June, 1891		1			
	Total	30	7	1	1	1

RECAPITULATION.

Employed during the year, as per Statement No. 9		419
do a portion of the year, as per Statement No. 10		40
Total		459
Deduct employed in the Excise and Weights and Measures Service	2	
do do do Gas Service	9	
do do do Food Inspection	2	
do do Weights and Measures and Gas Service	4	
do do do Food Inspection	2	
do do Preventive Service and Food Inspection	1	
		20
Net Total		439

INDEX.

		PAGE
Abatements		12-13
Acton " Free Press "	Subscription	138
Adams, J. S.	Salary	110
Adams, W. C.	do	142
Adulteration of Food—Expenditure, Page 17.	Details of	135
do do	Vote for	51
Aikens, Culver & Co.	Contingencies	145
Aldred, James	Refund	32
Alexander, Thomas.	Salary	108
Allen, G. A.	Duty pay	121
do	Salary	107, 111
Allen, O. H.	Refund	26
Allison, Charles	Salary	144
" Almonte Times (The) "	Subscription	139
American Cigarette Co.	Refunds	34, 35
American Consul	Official document	140
Armor, W.	Distribution of Seizures	130
do	Salary	107
Amounts voted and Expenditure authorized for each service		51
Anderson, A.	Refunds	27, 31
Anderton, Jas.	do	27, 29, 30, 32
Anthony, E. H. & T.	Contingencies	136
" Antigonish Casket "	Subscription	139
Appendix A.	Revenue Statistics	53-105
do B.	Details of expenditure, &c	106-157
Archambault, R.	Cab-hire	140
do	Petty expenses	136, 140, 145
do	Salary	137
Arnold, Thos,	Contingencies	125
Arnold, Fenwick & Co.	do	136
Ashfield, S. & Co.	do	140
Ashbury, E. A.	Refund	36
Atherton, R.	Salary	114
Aubin, A.	Contingencies	149
do	Salary	147
Audette, L. A.	Law stamps account	16
Babington, F. W.	Salary	135
Baby, Jos.	do	112
Baby, J. C.	Distribution of Seizures	131
do	Salary	112
Baby, W. A. D.	Duty pay	122
do	Salary	107, 112
Badgerow, A. H.	Refund	36
Bailey, John	Purchaser	104
Bajus, P.	Refunds	27, 29, 31, 33
Baker, J. S.	Salary	142
Bank of British Columbia (The)	Lessee	102
Barber, J. S.	Salary	110
Barker, C.	do	112
Barrett, J. K.	Contingencies and Salary	116
Barrett, Thos. J.	Salary	108
Barrie Gas Office.	Contingencies and Salaries	146
Barry, Miss A.	Contingencies	118
Barsalo, Edward	Cullers' fees	124
Barton, F.	Refunds	31, 33
Battle, M.	Distribution of Seizures	130
do	Salary	108
Bayard, G. A.	do	108
Beasley, R. S.	do	107
Beasley, R.	do	111
Beattie, Thomas	do	141
Beauchamp, J. P.	do	112
Beauchemin, A. O. T.	Law costs	120
Beauchesne, P. C.	Commission	121
Beaupré, Noël.	Culler's annuity	127

APPENDIX B.—*Continued.*

No. 9.—LIST of Persons employed by the Inland Revenue Department on Salary, during the Year ended 30th June, 1891.

NAME.	SERVICE.						
	Inside.	Excise.	Cullers' Office.	Weights and Measures.	Gas.	Preventive.	Food Inspection.
Adams, J. S		1					
Adams, Wm. C				1			
Alexander, Thos		1					
Allen, G. A		1					
Allison, Chas				1			
Amor, Wm		1					
Archambault, R.	1						
Atherton, R.		1					
Aubin, A					1		
Babington, F. W							1
Baby, J. C.		1					
Baby, Jos.		1					
Baby, W. A. D		1					
Baker, J. S				1			
Barber, J. S.		1					
Barker, C.		1					
Barrett, J. K		1					
Barrett, Thos. J.		1					
Battle, M.		1					
Bayard, Gilbert A.		1					
Beasley, R.		1					
Beasley, R. S.		1					
Beattie, Thos				1			
Beauchamp, J. P.		1					
Bédard, W. G.		1					
Bellemare, R.		1					
BelleRives, Chas			1				
Belyea, T. H.		1					
Bennett, Jas.		1					
Bickle, J. W.		1			1		
Bish, Philip.		1					
Blair, J. B.		1					
Blatch, F. K.	1						
Blethem, C. W.		1					
Bois, G. A.				1			
Boivin, C. A.		1					
Bolster, G. I.				1			
Boomer, J. B.		1					
Borradaile, R.		1					
Boucher, O. N. E		1					
Bourassa, G.		1					
Bourassa, P. E.				1			
Bourget, O.		1					
Bouteiller, G. A.		1					
Brennan, John		1					
Broadfoot, S.		1					
Brown, J. F.	1						
Brown, J. J.		1					
Browne, G. W.		1					
Brunel, G.	1						
Brunel, J	1						
Bruneau, P. C. A.				1			
Bulmer, Wm.		1					
Burk, T.		1					
Burrows, Wm.					1		
Byrnes, John.	1						
Cahill, J. H.		1					
Cahill, J. W.		1					
Cahill, T.		1			1		

APPENDIX B.—No. 9.—LIST of Persons employed by the Inland Revenue Department, &c.—*Continued.*

Name.	Service.						
	Inside.	Excise.	Cullers' Office.	Weights and Measures.	Gas.	Preventive.	Food Inspection.
Cameron, D. M		1					
Campbell, G. J		1					
Campeau, F. R. E	1						
Camyré, J. N		1					
Carroll, D		1					
Carter, Wm	1						
Casey, Thomas							1
Caven, A		1					
Caven, W		1					
Caven, J. McD		1					
Chabot, F. X				1			
Chalut, J. O				1			
Chisholm, J. J				1			
Christie, W. J		1					
Clark, A. F		1					
Code, A				1			1
Code, Abraham		1					
Coleman, Chas		1					
Coleman, J. J		1					
Coles, F. H		1					
Conway, B. J		1					
Codd, Herbert J. S		1					
Cosgrove, John				1			
Cosgrove, J. J						1	
Costello, J. W				1			
Costigan, H. A		1					
Costigan, J. J		1					1
Coughlin, D				1			
Courtney, J. J		1					
Cowley, W				1			
Cowan, Edgar				1			
Cox, J. E		1					
Craig, Joseph		1					
Crawford, W. P		1					
Crotty, John		1					
Crowe, W		1					
Cullen, P		1					
Curless, C						1	
Daoust, J. A				1			
Daveluy, George			1				
Davis, James		1					
Davis, John		1					
Davis, T. G		1					
Dawson, W		1					
DeMartigny, C. P			1				
Dennis, W. A					1		
Desroches, David		1					
Devine, Felix M		1					
Dibblee, Wm		1					
Dick, J. W		1					
Dickson, C. T		1					
Dillon, S		1		1			
Dixon, H. G. S		1					
Dingman, N. J		1					
Dodd, John		1					
Dodds, E. W		1					
Donaghy, Wm		1					
Dorion, G. T				1			
Doyon, J. A	1						
Dowling, Thomas		1					
Dudley, W. H		1					

APPENDIX B.—No. 9.—LIST of Persons employed by the Inland Revenue Department, &c.—*Continued.*

NAME.	SERVICE.						
	Inside.	Excise.	Cullers' Office.	Weights and Measures.	Gas.	Preventive.	Food Inspection.
Duguay, Joseph		1					
Dumbrille, R. W		1					
Dumbrille, J.		1					
Dumouchel, Léandre		1					
Dunlop, C		1					
Duplessis, C. Z		1					
Dustan, W. M.		1					
Earle, R. H		1					
Egan, James				1			
Egener, A		1					
Elliott, G. M					1		
Erb, A. A		1					
Evans, G. T.		1					
Fahey, Ed		1					
Fahey, Owen		1					
Falconer, Jas		1					
Ferguson, J		1					
Ferguson, John C		1					1
Finlay, Hugh				1			
Fiset, Arthur		1					
Flynn, D		1					
Forest, E. R		1					
Flynn, J. P		1					
Fortier, J. J. O		1					
Fowler, Geo	1						
Fox, Thomas		1					
Fox, J. D		1					
Fraser, G. J		1					
Freeze, E. C				1			
Gallagher, F			1				
Gatien, F		1					
Gerald, C		1					
Gerald, W. H		1					
Gerald, W. J	1						
Giffin, W. W				1	1		
Gill, Wm		1					
Girard, Iréné		1					
Girdlestone, R. J. M		1		1			
Godson, H		1					
Goodman, A. W		1					
Gorman, M				1			
Goron, D.		1					
Gosnell, T. S		1					
Gouin, N			1				
Gow, James		1					
Gow, J. E		1					
Gowen, Edmund			1				
Graham, W. J		1			1		
Graham, W. T		1					
Grant, H. H		1					
Greey, S		1					
Grimason, Thomas		1					
Hagerty, P		1					
Hall, C. R	1						
Hall, J. J		1					
Hamilton, W. L		1					
Hamilton, C. M		1					
Hanley, A.		1					
Harney, Thos			1				
Hart, P. D.		1					

APPENDIX B.—No. 9.—LIST of Persons employed by the Inland Revenue Department, &c.—*Continued.*

NAME.	SERVICE.						
	Inside.	Excise.	Cullers' Office.	Weights and Measures.	Gas.	Preventive.	Food Inspection.
Hartt, Wm					1		
Harwood, R. U		1					
Hastie, Wm		1					
Hawkins, A. St. George					1		
Hawkins, W. L		1					
Hayward, W. J				1			
Hébert, C. D		1					
Helliwell, H. N		1					
Henderson, W		1					
Henry, J. M. B		1					
Henwood, Geo		1					
Heron, W. L	1						
Hesson, C. A		1					
Hicks, W. H		1					
Hill, A. M		1					
Himsworth, Wm	1						
Hobbs, G. N		1					
Howie, A		1					
Howdon, R		1					
Hudon, A		1					
Hughes, R. A				1			
Huggard, R. T				1	1		
Iler, B		1					
Ironside, G. A.		1					
Irwin, Robert		1					
Irwin, Samuel				1			
James, T. C		1					
Jamieson, R. C		1					
Johnson, Wm				1	1		
Johnston, G. E		1					
Johnstone, J. K					1		
Johnstone, W. J				1			
Jones, Richard				1			
Jubenville, J. P		1					
Keeler, G. S.		1					
Keilty, Thos		1					
Kellock, D		1					
Kelly, Edward				1			1
Kelly, M. J				1			
Kenning, J. H		1					
Keogh, P. M		1					
Kidd, Thomas						1	1
King, R. M		1					
Kinnee, Daniel				1			
Knight, Jos					1		
Knowlson, J. B		1					
Laidman, Richard H				1			
Lang, V		1					
Langlois (*dit* Traversy), F. X		1					
Laporte, Geo		1					
LaRue, Geo		1					
Lawlor, H		1					
Lawlor, R. A		1			1		
Lecours, H. T		1					
Lee, Edward		1					
Lefebvre, F. X							1
Leighton, W. R		1					
LeMoine, Jules		1					
LeMoine, J. M.		1					
Lépine, Louis		1					

APPENDIX B.—No. 9.—LIST of Persons employed by the Inland Revenue Department, &c.—*Continued.*

NAME.	SERVICE.						
	Inside.	Excise.	Cullers' Office.	Weights and Measure.	Gas.	Preventive.	Food Inspection.
Leprohon, R. M		1					
Lett, F. P. A		1					
LeVasseur, N					1		
Logan, John		1					
Lusignan, A	1						
Lynch, P				1			
Lynes, K		1					
Lyons, E		1					
Lyons, John				1			
Macdonald, A. B		1					
Macdonald, D		1					
Macdonald, J. A				1			
Macfarlane, Thos							1
Mackay, G. W		1					
Mackay, J. H		1					
Malo, T		1					
Magness, Robert				1			
Malone, Thos			1				
Manning, J		1					
Marchand, N					1		
Marcon, jun., F. E		1					
Marentette, Alex				1			
Marshall, F		1					
Mason, F		1					
Mason, Jas		1					
Miall, E	1						
Miller, A					1		
Miller, J. E		1					
Miller, W. F		1					
Millier, Elie		1					
Milligan, R. J				1			
Milliken, E		1					
Moore, T		1					
Moore, Wm		1					
Moreau, Alf				1	1		
Morrow, John		1					
Mulhern, M. M		1			1		
Munro, H. D		1			1		
Murphy, F		1					
Murray, A. E		1					
Murray, David		1					
McAllister, A		1					
McCarthy, J. P	1						
McClanaghan, M		1					
McCloskey, J. R		1					
McCoy, Wm		1					
McCuaig, Aug. F		1					
McCullough, A	1						
McDonald, J				1			
McDonald, J. A		1					
McDonald, M. A		1					
McGill, A							1
McIntyre, Donald		1					
McKay, John				1			
McKenzie, T. H				1			
McKimm, U. H		1					
McNamara, M		1					
McPherson, A. F		1					
McPhie, Donald					1		
McSween, James		1					

APPENDIX B.—No. 9.—LIST of Persons employed by the Inland Revenue Department, &c.—*Continued.*

Name.	Service.						
	Inside.	Excise.	Cullers' Office.	Weights and Measures.	Gas.	Preventive.	Food Inspection.
Nash, S. C		1					
Neelands, H		1					
Nettle, R	1						
Nichols, J. T		1					
Olivier, J. A				1			
O'Brien, J. F		1					
O'Donnell, J		1					
O'Leary, T. J		1					
Panneton, G. E		1					
Patton, Jas			1				
Patterson, A. C				1			
Pennoyer, H. J		1			1		
Perkins, L. A		1					
Perry, G. L		1					
Petit, J. B				1			
Pinsonnault, Alfred		1					
Piper, H				1			
Pole, C. W		1					
Powell, J. B		1					
Power, R			1				
Power, Thos. A		1					
Provost, J. J				1			
Purdie, S. A					1		
Quain, Redmond	1						
Quinn, J. D		1					
Racicot, Chas. George		1					
Ramon, Pierre		1					
Reddan, C. J		1					
Reddin, James				1			
Reilly, John S		1					
Renaud, A		1					
Rennie, George		1			1		
Richard, D				1			
Richard, J. B. T		1					
Richard, J. U				1			
Robins, Paul M	1						
Roche, H. G					1		
Rogerson, J. M		1					
Ross, H. E				1			
Ross, S. F		1					
Rouleau, J		1					
Rowan, A					1		
Rowland, E		1					
Rowland, F		1					
Russell, W. W				1			
Ryan, J. B				1			
Saucier, X		1					
Schram, B		1					
Scovil, W. B				1			
Scullion, J. W		1					
Shanacy, M		1			1		
Sexton, J		1					
Shaw, J. F	1						
Simpson, A. F		1					
Sinon, E. H		1					
Slattery, R		1					
Slattery, Thos				1			
Smyth, B. B		1					
Spereman, J. J		1					
Spence, F. H		1					
Spence, John		1					

APPENDIX B.—No. 9.—LIST of Persons employed by the Inland Revenue Department, &c.—*Concluded.*

NAME.	SERVICE.						
	Inside.	Excise.	Cullers' Office.	Weights and Measures.	Gas.	Preventive.	Food Inspection.
Standish, J. G.		1					
Stewart, Jas.		1					
Stratton, W. C.		1					
Ste. Marie, L. C. A.		1					
Sullivan, L. D.		1					
Taylor, G. W.		1					
Taylor, J. F.		1					
Till, T. M.		1					
Thomas, J. S				1			
Thomas, Philip						1	
Thomlinson, W. H.				1			
Tompkins, P.		1					
Toupin, F. X. J. A		1					
Tremaine, L. E				1			
Urquhart, Jas.				1			
Valin, J. E	1						
Verner, Francis		1					
Villeneuve, J.		1					
Vincent, J. L		1					
Wainwright, F. G		1					
Waller, J		1					
Walsh, Daniel		1					
Walsh, M. F.	1						
Watson, James							1
Watkins, J. A.		1					
Westman, T.		1					
Weir, Jas		1					
Weyms, C.		1					
Whelan, W. F.			1				
Whitteker, Wm				1			
Williams, Geo		1					
Williams, J.					1		
Wilmot, J. B.				1			
Wilson, David		1					
Winter, A. W.		1					
Woodward, G. W		1					
Wright, Robt				1			
Yates, J. M.		1					
Total	24	273	11	67	29	4	11

APPENDIX B—*Concluded.*

No. 10.—LIST of Persons employed by the Inland Revenue Department on Salary, during a portion of the Year ended 30th June, 1891.

NAME.	PERIOD.	SERVICE.				
		Excise.	Weights and Measures.	Gas.	Preventive.	Food Inspection.
Bell, James E	From 1st Feb., 1891, to 30th June, 1891	1	....	....	....	....
Bowman, Allan	do 8th Oct., 1890, to 30th June, 1891	1	....	....	....	....
Boyle, P.	do 16th Sept., 1890, to 30th June, 1891	1	....	....	....	....
Brabant, J. B. G. N.	do 1st Oct., 1890, to 30th June, 1891	1	....	....	....	....
Bradley, Miss Carrie	do 15th Sept., 1890, to 30th June, 1891	1	....	....	....	....
Brennan, D. J	do 14th Feb., 1891, to 30th June, 1891	1	....	....	....	....
Bruneau, Adolphe	do 1st May, 1891, to 30th June, 1891	....	....	1	....	....
Campbell, J. McD	do 1st July, 1890, to 31st May, 1891	1	....	....	....	....
Chisholm, Noble	do 21st July, 1890, to 30th June, 1891	1	....	....	....	....
Clark, James Alfred	do 24th April, 1891, to 30th June, 1891	1	....	....	....	....
Colcleugh, J. W	do 4th Nov., 1890, to 30th June, 1891	1	....	....	....	....
Daveluy, J. P	do 17th July, 1890, to 30th June, 1891	1	....	....	....	....
Desrivières, F. L.	do 1st July, 1890, to 31st Jan., 1891	....	1	....	....	....
Doyle, B. J.	do 5th Jan., 1891, to 30th June, 1891	1	....	....	....	....
Dunne, J. P	do 1st Jan., 1891, to 30th June, 1891	1	....	....	....	....
Fraser, P.	do 1st Feb., 1891, to 30th June, 1891	1	....	....	....	....
Fitzgerald, E. W	do 26th Mar., 1891, to 30th June, 1891	....	1	....	....	....
Flaherty, E. J. O	do 12th Sept., 1890, to 30th June, 1891	1	....	....	....	....
Gervais, Samuel	do 19th June, 1891, to 30th June, 1891	....	1	....	....	....
Hamilton, T. C	do 1st July, 1890, to 30th Sept., 1890	1	....	....	....	....
Hasty, M. J	do 21st Nov., 1890, to 30th June, 1891	1	....	....	....	....
Hawkins, A. C	do 13th Feb., 1891, to 30th June, 1891	1	....	....	....	....
Howard, W. S	do 23rd Sept., 1890, to 30th June, 1891	1	....	....	....	....
Kelly, John F	do 9th July, 1890, to 30th June, 1891	....	....	....	1	....
Lane, T. M	do 25th Mar., 1891, to 30th June, 1891	1	....	....	....	....
Lawder, John	do 10th Feb., 1891, to 30th June, 1891	1	....	....	....	....
Leighton, W. K	do 21st July, 1890, to 30th June, 1891	....	1	....	....	....
Looby, John	do 11th Mar., 1891, to 30th June, 1891	....	1	....	....	....
Macdonald, A. D	do 1st July, 1890, to 31st Aug., 1890	1	....	....	....	....
Marion, Eugène	do 8th Jan., 1891, to 30th June, 1891	1	....	....	....	....
Metcalf, W. F	do 24th July, 1890, to 30th June, 1891	1	....	....	....	....
Moore, J. N	do 1st July, 1890, to 31st Aug., 1890	1	....	....	....	....
O'Brien, C.	do 10th Feb., 1891, to 30th June, 1891	1	....	....	....	....
Robson, James	do 1st July, 1890, to 31st Aug., 1890	1	....	....	....	....
Simard, H.	do 1st July, 1890, to 28th Feb., 1891	....	1	....	....	....
Tansey, J. P. F	do 1st July, 1890, to 31st Mar., 1891	1	....	....	....	....
Thomas, Robert	do 26th Jan., 1891, to 30th June, 1891	1	....	....	....	....
Webster, Thomas	do 1st July, 1890, to 31st July, 1890	1	....	....	....	1
Wheatley, Alfred E.	do 9th March, 1891, to 30th June, 1891	....	1	....	....	....
	Total	30	7	1	1	1

RECAPITULATION.

Employed during the year, as per Statement No. 9		419
do a portion of the year, as per Statement No. 10		40
Total		459
Deduct employed in the Excise and Weights and Measures Service	2	
do do do Gas Service	9	
do do do Food Inspection	2	
do do Weights and Measures and Gas Service	4	
do do do Food Inspection	2	
do do Preventive Service and Food Inspection	1	
		20
Net Total		439

INDEX.

		PAGE
Abatements		12-13
Acton "Free Press"	Subscription	138
Adams, J. S.	Salary	110
Adams, W. C.	do	142
Adulteration of Food—Expenditure, Page 17.	Details of	135
do do	Vote for	51
Aikens, Culver & Co.	Contingencies	145
Aldred, James	Refund	32
Alexander, Thomas.	Salary	108
Allen, G. A.	Duty pay	121
do	Salary	107, 111
Allen, O. H.	Refund	26
Allison, Charles	Salary	144
"Almonte Times (The)"	Subscription	139
American Cigarette Co.	Refunds	34, 35
American Consul	Official document	140
Armor, W.	Distribution of Seizures	130
do	Salary	107
Amounts voted and Expenditure authorized for each service		51
Anderson, A.	Refunds	27, 31
Anderton, Jas.	do	27, 29, 30, 32
Anthony, E. H. & T.	Contingencies	136
"Antigonish Casket"	Subscription	139
Appendix A.	Revenue Statistics	53-105
do B.	Details of expenditure, &c	106-157
Archambault, R.	Cab-hire	140
do	Petty expenses	136, 140, 145
do	Salary	137
Arnold, Thos,	Contingencies	125
Arnold, Fenwick & Co.	do	136
Ashfield, S. & Co.	do	140
Ashbury, E. A.	Refund	36
Atherton, R.	Salary	114
Aubin, A.	Contingencies	149
do	Salary	147
Audette, L. A.	Law stamps account	16
Babington, F. W.	Salary	135
Baby, Jos.	do	112
Baby, J. C.	Distribution of Seizures	131
do	Salary	112
Baby, W. A. D.	Duty pay	122
do	Salary	107, 112
Badgerow, A. H.	Refund	36
Bailey. John	Purchaser	104
Bajus, P.	Refunds	27, 29, 31, 33
Baker, J. S.	Salary	142
Bank of British Columbia (The)	Lessee	102
Barber, J. S.	Salary	110
Barker, C.	do	112
Barrett, J. K.	Contingencies and Salary	116
Barrett, Thos. J.	Salary	108
Barrie Gas Office.	Contingencies and Salaries	146
Barry, Miss A.	Contingencies	118
Barsalo, Edward	Cullers' fees	124
Barton, F.	Refunds	31, 33
Battle, M.	Distribution of Seizures	130
do	Salary	108
Bayard, G. A.	do	108
Beasley, R. S.	do	107
Beasley, R.	do	111
Beattie, Thomas	do	141
Beauchamp, J. P.	do	112
Beauchemin, A. O. T.	Law costs	120
Beauchesne, P. C.	Commission	121
Beaupré, Noël.	Culler's annuity	127

INDEX—*Continued.*

		PAGE.
Bédard, Jérémie	Culler's annuity	127
Bédard, W. G.	Distribution of Seizures	130
do	Salary	108
Bell, Chas. N.	Inspection of Staples	134
Bell, James	Refunds	27, 29, 31
Bell, J. E.	Salary	111
Bell Telephone Co.	Contingencies	140
do	Rent of Telephone &c	125
Belle-Rives, C.	Salary	125
Belland, J. E. & Co.	Extra Services	125
Bellemare, R.	Contingencies and Salary	116
do	Inspection of Staples	134
Belleville Excise Division	Contingencies and Salaries	106
do Gas Office	do do	146
do Weights and Measures Office	do do	141
Belyea, T. H.	Salary	114
Beneteau, P.	Refunds	35
Benjamin, E. R.	Bill Stamps	16
Bennett, Jas.	Salary	110
Bennett, Robert	Contingencies	145
Bergeron, Joseph	Culler's expenses	126
do	do fees	124
Berlin Gas Office	Contingencies	146
Bernhardt, C. S.	Refunds	33
Bernhardt, Louis	do	28, 32
Bernhardt, P.	do	27, 28, 31, 33
Best, W. F.	Food analysis	135
Bickle, J. W.	Salary	109, 146
Bill Stamps—Distributors' Account		16
Binney, J. W.	Commission	121
Bireley, N. F.	Lessee	102
Bireley, Sarah, K.	do	102
Birkett, T.	Contingencies	118, 136, 145
Bish, Philip	Duty pay	122
do	Salary	106
Bisset, A.	Distribution of Seizures	132
Bixel, A.	Refunds	27, 28, 30, 32
Bixel, Cyrus	do	28, 31, 33
Blackburn, R., *et al.*	Lessee	102
Blackwood, Wm.	Refunds	27, 29, 31
Blair, H. C.	Commission	121
Blair, J. B.	Distribution of Seizures	130
do	Salary	110
Blaisdell, N. S.	Lessee	102
Blatch, F. K.	Salary	137
Blethem, C. W.	do	115
Bliss, D. E. F.	Travelling expenses	138
Bogue, J.	Distribution of Seizures	132
Bois, G. A.	Salary	143
Bolster, Geo. I.	do	141
Boomer, J.	Purchaser	104
Boomer, J. B.	Salary	110
Booth, J. R.	Lessee	102
Borbridge, S. & H.	Contingencies	145
Borden, Ritchie, Parker & Chisholm.	Law costs	120
Borrodaile, R.	Contingencies and Salary	116
Bossé, H.	Extra Service	118, 137
Boswell, Mrs. Mary	Damages	145
Boucher, O. N. E.	Salary	114
Boulanger & Marcotte	Subscription	125
Bourassa, G.	Distribution of Seizures	131
do	Salary	113
Bourassa, P. E.	do	142
Bourget, O.	Distribution of Seizures	131
do	Salary	113
Bouteiller, G.	Duty pay	122
do	Salary	106
Boutell, A. A.	Refunds	34
Bowen, N. H.	Purchaser	104
Bowie, B.	Refund	28
Bowie, C. A.	Salary	113

INDEX—*Continued.*

		PAGE.
Bowie, R.	Refunds	27, 31, 33
Bowman, M.	Food analysis	135
Bowman, Allan	Salary	107
Boyd, Angus	Commission	121
Boyle, P.	Subscription	125
Boyle, P.	Salary	109
Brabant, J. B. G. N.	do	113
Bradley, Carrie	do	111
Brain, Edwin	Refunds	29, 30, 32
Brain, John	do	27
"Brampton Times (The)"	Subscription	140
Brandon "Mail (The)"	do	139
Brantford "Courier (The)"	do	138
Brantford Excise Division	Contingencies and Salaries	106
Brennan, D. J.	Salary	111
Brennan, John	Duty-pay	121
do	Salary	111
Bridges Revenue		13
Bright, T. G. & Co.	Refund	26
Bristol Ferry	Lessee	13
British American Bank Note Co.	Contingencies	149
do	Engraving and printing, &c	118
do	Law Stamps	134
British Columbia District.	Contingencies and Salaries	116
Broadfoot, S.	Salary	106, 146
Brockville Gas Office.	Contingencies and Salary	146
Brockville "Times."	Subscription	138
Bronson, Harris & Co.	Lessees	102
Bronsons & Weston.	do	102
Bronson & Weston Lumber Co. (The)	do	102
Brook, Joseph.	Tenant	104
Broomer, George.	Contingencies	126
Brousseau, J. B.	Culler's annuity	127
Browne, G. W.	Salary	107
Brown, J. F.	do	137
Brown, J. J.	do	108, 111
Bruneau, P. C. A.	do	143, 148
Brunel, G.	do	137
Brunel, J.	do	137
Bryson, Graham & Co.	Contingencies	140
Buckingham and Cumberland Ferry	Lessee	13
Buffalo and Navy Island Ferry	do	13
Buffalo and Point Albinot Ferry	do	13
Buildings	Revenue	13
Bulmer, J.	Salary	112
Bunster Bro.	Refund	27
Burgess, Thos.	Services	145
Burk, T.	Contingencies	116
do	Distribution of Seizures	132
do	Salary	114
Burrow, Stewart & Milne.	Contingencies	145
Burrows, W.	do and Salary	146
Butterworth & Co.	do	136
Byrnes, John.	Salary	137
Cahill, J. H.	do	113
Cahill, J. W.	Duty pay	121
do	Salary	111
Cahill, Thomas.	do	109, 147
Calcutt, H.	Refunds	28, 29, 32, 33
Cameron, A. McK.	Commission	121
Cameron, J. D.	Law costs	120
Cameron, D. M.	Distribution of Seizures	131
Cameron, D. M.	Duty-pay	121
do	Salary	113
Campbell, G. J.	do	115
Campbell, J. McD.	do	106
Campeau, F. R. E.	do	137
Camyré, J. N.	do	115
"Canada (Le)"	Advertising	134
do	Subcription	139
Canada Atlantic Railway Co (The)	Freight	118

INDEX—*Continued.*

		PAGE.
" Canadian Agriculturist "	Advertising	145
Canadian Express Company	Freight	140, 145
" Canadian Gazette (The) "	Subscription	139
Canadian Journal of Commerce	do	138
" Canadian Manufacturer "	do	138
Canadian Pacific Railway (The)	Freight	118
Canadian Rubber Co (The)	Rubber tubing	118
Canadian Twist Tobacco	Quantity taken for consumption	18
Cape Breton Excise Division	Contingencies and salaries	114
do do	Distribution of seizures	132
Cape Breton Weights and Meas. Divis.	Contingencies and Salaries	143
" Cardwell Sentinel (The) "	Subscription	140
Carling, F. H.	Refunds	28, 30, 33, 34
Carmichael, D.	Lessee	102
Carroll, M.	Contingencies	140
Carroll, D.	Salary	115
Carter, W.	do	137
Casey, John.	Contingencies	140
Casey, T.	Salary	135
Casgrain, Angers & Lavery	Law costs	120
Cassels, R. Jr.	Law Stamps account	16
" Catholic Record " (The)	Advertising	145
do	Subscription	138
" Catholic Weekly "	do	138
Cauchy, Chas.	Culler's annuity	127
Caven, A.	Salary	110
Caven, J. McD.	do	110
Caven, W.	Duty-pay	121
do	Salary	112
Chabot, F. X.	do	142
Chalut, J. O.	do	142
Chaperon, J. A. E.	Refunds	34
Charland, J. A.	Commisssion	121
Charlottetown Excise Division	Contingencies and salaries	115
do Gas District	do do	148
do Weights and Measures	Division. Contingencies and salaries	144
Chatham, N.B., Excise Division	Contingencies and salaries	114
Chaudière Electric Light Co. (The)	Lessee	102
Chevalier, Jean	Purchaser	104
Chief Inspector—Excise	Contingencies and salary	117
do Standards	do do	144
Chisholm, J. J.	Salary	143
Chisholm, W. N.	do	108
Choate & Kern.	Purchaser	104
Christie, W. J.	Salary	115
" Chronicle (Lakefield) "	Subscription	125
Church, P. H. & L. R.	Lessees	102
Cigars- License fees		18
do Licenses issued, materials used, number produced		82
do do do	do Comparative Statement for 1889-90 and 1890-91	84
do Number taken for consumption		18
do Revenue		6, 7
do Revenue Comparative Statement		88
do Warehouse transactions		86
" Citizen " Printing and Publishing Co.	Advertising	134-136
do do do	Subscription	138
Clark, A. F.	Salary	110
Clark, Jas. A.	do	113
Clarke, J. A. P.	Refunds	29, 30, 32
Clarke, L. H. & Co.	do	27, 29, 31, 33
Clark, Thomas.	Culler's annuity	127
Claugher, Wm.	Refunds	31, 32
Clute, J. S.	Commission	121
Cobourg Gas District	Contingencies and salaries	146
Codd, H. J. S.	Salary	112
Code, A.	do	115
do	Food analysis	135-141
do	Travelling expenses	135
" Colchester Sun (The) "	Subscription	139
Colclough, J. W.	Salary	115

INDEX—*Continued.*

		PAGE.
Coleman, C.	Duty-pay	122
do	Salary	110
Coleman, J. J.	Distribution of seizures	131
do	Salary	112
Coles, F. H.	do	108
"Colonial Standard (The)"	Subscription	139
do do	Advertising	245
"Colonist (The)"	Subscription	138
"Commercial and Financial Chronicle"	do	139
Commission on Sale of Canada Twist	Stamps	121
do do	Vote for	51
do to Custom Officers, details	of Expenditure	121
do do	Vote for	51
Conroy, Mary	Lessee	102
Conway, A.	Extra services	137
Conway, B. J.	Duty-pay	122
do	Salary	109
Cornwall Excise Division	Contingencies and salaries	106
do Gas District	do do	146
Corporation of New Westminster	Lessee	102
Cosgrove, John	Salary	141
Cosgrove, L. J.	Refund	27, 29, 30, 33
Cosgrove, J. J.	Salary	111
Costello, W.	do	144
Costigan, H. A.	Inspection of staples	134
do	Salary	115
Costigan, Hon. John	do	137
do	Travelling expenses	138
Costigan, J. J.	Food analysis	135
do	Salary	112
do	Travelling expenses	135
Costigan, J. R.	Law costs	120
Coughlin, D.	Salary	141
"Courrier du Canada (Le)"	Subscription	138
do de St-Hyacinthe"	do	139
do des Provinces Maritimes"	do	140
"Courier (The)"	do	138
Courtney, J. J.	Salary	107
Coutlée, L. M.	Lessee	102
Couture, C.	Culler's annuity	127
Cowan, E.	Salary	143
Cowley, W.	do	144
Cox, J. E.	Duty-pay	122
do	Salary	111
Craig, Joseph	Duty-pay	122
do	Salary	106, 109
Cranmiller & White	Refund	33
Cranston, A.	do	27, 29, 32
Crawford, W. P.	Salary	107
Creeley, George	Purchaser	104
"Critic (The)"	Subscription	138
Crotty, John	Duty-pay	122
do	Salary	111
Crowe, W.	Duty-pay	122
do	Salary	111
Cullen, P.	do	113
Cullers' annuities		126, 127
do contingencies		125, 128
do fees		124
do salaries		125, 127, 128
Culling Timber—Expenditure, Page 15	Details of	124, 129
do do Vote for		125, 128
do Quantity culled, &c.	At Quebec	125, 127, 128
do do	Montreal, Lachine and Sorel	100
do do at	Three Rivers	101
do Revenue		14
do do Monthly deposits		20, 23
Curless, C.	Distribution of seizures	130, 131, 132
Currier, J. M.	Lessee	102
Cusson, François	Culler's fees	124
Custom House, City of Hamilton	Lessee of	13

INDEX—*Continued.*

		PAGE.
"Daily Examiner"	Subscription	139
"Daily Herald (The)"	do	140
"Daily Mercury"	do	139
"Daily News (The)"	do	139
"Daily Review (The)"	do	139
"Daily Sun (The)"	do	138
"Daily Telegraph (The)"	do	139
"Daily Times"	do	138
"Daily Witness"	do	139
Dalhousie Ferry	Lessee	13
D'Aoust, J. A.	Salary	142
Daveluy, George	do	127
Daveluy, J. P.	Contingencies	128
do	Salary	112
Davies, Robt.	Refunds	27, 29, 30, 33
Davies, Thos.	do	27, 29, 30, 32
Davis, Jas.	Duty pay	122
do	Salary	107
Davis, John.	Contingencies and salary	117
Davis, T. G.	Salary	108
Daws, A. J.	Refunds	26, 29, 31, 33
Dawson, W.	Duty-pay	121
do	Salary	110
De Martigny, C. P. L.	do	125
Demers, F. X.	Culler's annuity	127
Demers, L.	do	127
Dempster, R.	Refunds	26, 27, 29
Dennis, W. A.	Salary	146
Departmental Contingencies	Vote for	51
do Expenditure, Page 38	Details of	137-140
do do Vote for		51
Department of Public Printing and Stationery		140
Desaulniers, E.	Contingencies	128
Desrivières, F. L.	Salary	142
Desroches, D.	Commission	121
do	Salary	114
Devine, Félix M.	do	109
Diamond, W. Jeffers	Law costs	145
Dibblee, Wm.	Salary	114
Dick, J. W.	do	110
Dickson, C. T.	do	107
"Digby Courier (The)"	Subscription	138
Dingman, N. J.	Salary	110, 142
"Dispatch (The)"	Subscription	138
Distribution of Seizures		130-133
District Inspectors—Excise	Contingencies and salaries	116
do Gas	do do	149
do W. and M.	do do	144
Dixon, H. G. S.	Distribution of seizures	131
do	Salary	112
Dodd, John	do	112
Dodds, E. W.	do	106, 110
Dominion Express Co.	Freight	128, 140
"Dominion Oddfellow (The)"	Subscription	139
Dominion Phosphate Co (The)	Lessee	102
Donaghy, Wm.	Duty-pay	122
do	Salary	107
Donovan, John	Cartage	140
Dorion, G. T.	Salary	142
Dorval, G.	Culler's expenses	126
do	Culler's fees	124
Dorval, Philippe	Culler's annuity	127
Dow & Co., W.	Refunds	26, 33
Dowling, Thos.	Salary	116
Doyle, J. E.	Contingencies	138
Doyle, J. B.	Salary	113
Doyon, J. A.	do	137
Drake, Jackson & Co.	Law costs	145
Drewry, E. L.	Refunds	27, 29, 31, 32
Dublin "Freeman"	Subscription	139
Dudley, W. H.	Duty pay	121

INDEX—*Continued.*

		PAGE.
Dudley, W. H.	Salary	110
Dufresne & Mongenais	Contingencies	136
Duggan, Edward	Culler's expenses	127
Duggan, W.	Culler's annuity	127
Duguay, J.	Salary	113
Dumbrille, J.	Contingencies and salary	118
do	Salary	109
Dumbrille, R. W.	do	107
Dumouchel, L.	do	112
Dundas & Waterloo Road—Lessee	Minor Expenditure	13
"Dundas Star (The)"	Advertising	136
do	Subscription	139
Dunlop, C.	Salary	111
Dunne, J. P.	do	137
Dunnville Bridge—Lessee		13
Duplessis, C. Z.	Salary	114
Dustan, W. M.	do	115
Duty-pay to Officers		121
do Vote for		51
Earle, R. H.	Salary	111, 112
Eaton, C.	Refunds	29
Eddy, E. B., Manufacturing Co.	Contingencies	118, 136, 145
Edmunston & Maine Ferry	Lessee	13
Edwards, J. B.	Food Analysis	135
Egan, James	Salary	141
Egener, A.	do	107
Eimer & Amend	Contingencies	136
Elliott, G. M.	Commission	121
do	Salary	147
Ellis, W. H.	Food Analysis	135
"Empire (The)"	Subscription	138
Empire Tobacco Co.	Refunds	35
"Enterprise (The)"	Advertising	145
"Enterprise, Dutton (The)"	Subscription	139
"Enterprise, New Glasgow (The)"	do	139
"Equity (The)"	do	139
Erb, A. A.	Salary	107
Esmond, Jos. R.	Contingencies	118, 136, 140
Estate of Wells, Henry	Refunds	29, 31, 33
do of Kirchemer, Jacob	do	36
"Etudiant (L')"	Subscription	138
Evans, G. T.	Distribution of seizures	130
do	Salary	110
"Evénement (L')"	Subscription	139
"Evening Gazette (The)"	Advertising	145
do	Subscription	138
"Evening Telegram (The)"	do	138
Excise Contingencies. . Vote for		51
do Expenditure, page 9, Details of		106-123
do do Vote for		51
do General expenditure, page 9. Details of		118, 119
do Revenue		7
do do Comparative Statement, Showing increase or decrease for 1890-91		24, 25
do do Monthly deposits		20-23
do do Refunds		26-27
do Statistics		53-96
"Exeter Advocate (The)"	Subscription	138
Expenditure—Adulteration of Food, page 17. Details of		135-136
do Culling timber, page 15. do		124-129
do Departmental, page 38. do		137-140
do Details of (Appendix B.)		106-157
do Excise, pages 8-11 do		106-123
Expenditure—Gas Inspection, pages 45-46. Details of		146-149
do General Statement		4, 5
do Hydraulic Rent, page 17. Details of		134
do Inspection of Staples, page 17. Details of		134
do Minor Public Works, page 17. Details of		134
do Weights and Measures, pages 45-47. Details of		141 145
Fahey, Edward	Salary	107
Fahey, Owen	do	113
Fairall, H. S.	Refunds	31, 32

INDEX—*Continued.*

		PAGE.
Falconer, J. E.	Duty-pay	121
do	Salary	111
Feore, J. F.	Culler's annuity	127
Ferguson, J.	Salary	109
Ferguson, J. C.	Contingencies	135
do	Distribution of seizures	132
do	Food analysis	135
do	Salary	114
Ferland, Ed.	Commission	121
Ferland, Pierre	Culler's expenses	126
do	do fees	124
Ferries—Revenue		13
Fertilizers' Inspection Fees		17
Finlayson, Roderick	Lessee	102
Findley, H.	Salary	144
Fisher, John	Refunds	27, 29, 31, 33
Fiset, A.	Salary	114
Fiset, M.	Food analysis	135
Fitzgerald, E. W.	Contingencies	141
Fitzroy and Onslow Ferry—Lessee		13
Flindall, Jno. F.	Refunds	27, 28, 30, 32
Flynn, D.	Duty-pay	121
do	Salary	110
Flynn, J. P.	do	117
Foley, Mary.	do	125
Food—Adulteration of Expenditure, page 17.	Details of	135, 136
do do	Vote for	51
Foote, John J.	Advertising	125
do	Subscription	125, 128
Foote, S. B.	do	125
Foran, J. K.	Extra work	118
Foran, Miss L. M. C.	do	118, 137
Forest, E. R.	Salary	113, 114
Fort Erie and Buffalo Ferry	Lessee	13
Fortier, J. J. O.	Salary	113
Fowler, George	do	137
Fowler, S. H.	Lessee	102
Fox, J. D.	Salary	112
Fox, Thomas	do	112
Fox, Miss H.	Contingencies	118
Fraser, G. J.	Salary	106
Fraser, P.	do	113
Fréderick, Antoine	Culler's expenses	126
do	do fees	124
Fredericton Gas District	Contingencies and salary	148
do Weights and Measures Division	do do	143
"Free Press" Ottawa	Subscription	139
"Free Press" Winnipeg	do	139
Freeze, E. C.	Salary	143
Frenette, Joseph	Culler's annuity	127
Gallagher, F.	Salary	125
Garbatz, John	Purchaser	104
Garland, P.	Contingencies	118
Gas Inspection—Contingencies	Vote for	51
do Expenditure, pages 48 and 49.	Details of	146, 149
do Expenditure	Vote for	51
do Revenue		39
do do Monthly deposits		20, 23
do Stamps, Distributors Account		43, 44
Gatien, F.	Salary	114
Gaul, William	Contingencies	145
"Gazette de Joliette (La)"	Subscription	125
"Gazette (La)"	do	125, 138
Gerald, C.	Contingencies	118
do	Duty-pay	122
do	Salary	111
Gerald, W. H.	Duty pay	122

INDEX—*Continued.*

		PAGE.
Gerald, W. H.	Salary	109, 115
Gerald, W. J.	Contingencies	117
do	Salary	137
do	Travelling expenses	138
Gerhardt, C.	Contingencies	136
German Brewing Co. (The)	Refunds	30
Gervais, S.	Salary	142
Gibbons, Michael.	Culler's annuity	127
Giffin, W. W.	Salary	141, 146
Gilchen, T.	Culler's annuity	127
Gill, Wm.	Contingencies and salary	116
Gillespie & Co.	do	136
Girard, I.	Salary	108, 111
Girdlestone, Rd J. M.	do	115, 142
Girdwood, Mrs. F. M.	Contingencies	136
Glen, Miss M. M.	Extra services	118
"Glengarrian (The)."	Subscription	140
"Globe" (The)	do	139
Godson, H.	Contingencies and salary	117
Goldstein, B.	Refunds	35, 36
Gooderham, W. G.	do	27, 31, 32
Gooderham & Worts.	Contingencies	26, 136
Goodman, A. W.	Duty-pay	121
do	Salary	110
Goodyear Rubber Co. (The)	Contingencies	149
Gorman, M.	Salary	142
Goron, D.	do	112
Gosnell, T. S.	Distribution of seizures	132
do	Salary	115
Gouin, N.	do	128
Gove, C. M.	Commission	121
Government Stationery Office.	Stationery	140
do Telegraph Lines.	Lessee	13
Gow, J. E.	Duty-pay	122
do	Salary	107
Gow, James.	Contingencies and salary	116
Gowen, E.	Salary	125
Gower Point and LaPasse Ferry.	Lessee	13
Graham, K. D.	Cab hire	140
Graham, Wallace.	Law costs	120
Graham, W. T.	Salary	108, 111, 147
Grant, H. H	do	115
Grant, J. F.	Contingencies	119
Gravelle, J. A.	Distribution of seizures	130, 131
Gray, H. H.	Travelling expenses	138
Great Northern Transit Co.	Lessee	102
Great North-Western Telegraph Co.	Telegrams	140
Greey, S.	Salary	107
Greiner, Johannes	Contingencies	136
Grier, G. A. & Co.	Lessees	102
Griesinger, jun., Ls.	Refunds	32
Grimason, Thomas	Salary	107
"Grip" Printing and Publishing Co.	Subscription	139
"Guardian (The)"	do	139
Guelph Excise Division	Contingencies and Salaries	106
do Gas District	do do	146
do "Herald"	Subscription	138
Guilfoyle, Mrs. B.	Extra Services	118
Gwyn, Cyril	Refunds	29, 31, 33
Hadrill, Geo.	Inspection of Staples	134
Hagarty, P.	Salary	115
Halifax Excise Division	Contingencies and Salaries	115
do Gas District	do do	148
do Weight and Measures Division	do do	143
Hall, C. R.	Salary	137
Hall, J. J.	do	109
Hall, J. S., jun.	Law Costs	120
Hamel, A. F.	Culler's annuity	127
Hamilton, A. G.	Commission	121
Hamilton, C. M.	Salary	108
Hamilton Excise Division	Contingencies and Salaries	107

INDEX—*Continued.*

		PAGE.
Hamilton Excise Division.	Distribution of Seizures	120
do Gas District	Contingencies and Salaries	146
do Weight & Measures Division	do do	141
Hamilton, T. C.	Salary	110
Hamilton, W. L.	Contingencies and Salary	116
Hamilton, James	Distribution of Seizures	132
Hanley, A.	Salary	107
Hanna, W. J.	do	146
Harbours Revenue.		13
Harney, Thomas	Salary	125
Harris & Campbell	Contingencies	119
Harrison, F.	do	136
Hart, E.	Extra Services	137
Hart, P. D.	Salary	106
Hartt, William	do	147
Harty, M. J.	do	109
Harwood, R. U.	do	112
Haslam, W. H.	Refunds	29, 32, 33
Haslam, Wm.	do	27
Hasenfratz & Lawson	do	26, 30
Hastie, W.	Salary	112
Hawkins, A. C,	do	106
Hawkins, A. St. George	do	147
Hawkins, W. L.	do	106-115
Hay, Marcelin	Refunds	36
Hayward, C. W.	do	28, 29, 31, 32, 33
Hayward, W. J.	Salary	142
Hearn, John	Contingencies	125
Hébert, C. D.	Salary	114
Helliwell, H. N.	Distribution of Seizures	130
do	Salary	110
Henderson, W.	do	110
Henry, J. M. B.	do	108
Henry, James	Refunds	36
Henser, Henry, & Co.	do	26, 27, 28, 30, 33
Henser, Peter	do	34
Henwood, George	Duty pay.,	122
do	Salary	106-111
"Herald (The)"	Subscription	138, 139
Herbert, M. J.	Refunds.	27
Hergott Bros.	do	29, 31, 33
Heron, W. L.	Salary	137
Hesson, C. A.	Distribution of Seizures	130
do	Salary	110
do	Minor Public Works.	134
Hesson, F. A.	Commission	121
Hewer, James	Refund	27
Heyd, B.	Lessee	102
Hicks, W. H.	Salary	108-147
Higgins, Miss Eliza M.	Extra service	145
Hill, A. M.	Salary	114
Himsworth, William	do	137
Hobbs, G. N.	do	107
Hogg, William A.	Commission	121
Holden, Daniel	Purchaser	104
Holliday, Thomas	Refunds	28, 30, 33
Holmes, Margaret	Contingencies	125
Hoodless, J. & Son	do	149
Houde, B, et Cie	Refunds	34, 35, 36
Howard, W. S.	Salary	111
Howden, Richard	Distribution of Seizures	130
do	Salary	109
Howie, A.	Duty pay..	122
do	Salary	107
Hudon, A.	do	112
Huether, C.	Refunds.	27, 28, 30, 33
Huether, Henry	do	32
Huggard, R. T.	Salary	144, 148
Hughes, P. A.	Contingencies	118
Hughes, R. A.	Salary	142
Hussey, F.	Commission	121

INDEX—*Continued.*

		PAGE.
Hull Ferry	Lessees	13
Hunter, S.	Distribution of Seizures	132
Hutton, John	Cab hire	140
Hydraulic and other Rents, Appendix A		102-105
do do Lessees account		12
do do Monthly deposits		22, 23
do do Revenue		12
do do Vote for		51
Iler, B.	Distribution of Seizures	131
do	Duty pay	121
do	Salary	107
Index of Current Events	Subscription	139
Inland Revenue Department, List of persons employed in		150-157
Innstall, G. C.	Commission	121
Inspection of Staples—Expenditure, Page 17. Details of		134
do Vote for		51
Inspector of Bonded Factories	Contingencies	117
do Distilleries	do and Salary	117
do Tobacco Factories	do	117
" Intelligencer "	Subscription	139
" Investigator "	do	138
" Irish Canadian (The) "	do	125, 138
Ironside, G. A.	Salary	109
Irwin, R.	do	107
Irwin, Samuel	do	141
Jacobs, H.	Refunds	36
James, T. C.	Salary	115
Jamieson, J. H.	Law costs	120
Jamieson, R. C.	Duty pay	122
do	Salary	109
Jeunest, P.	Culler's annuity	126
Jobin, Jacques	do	126
Johnson, W.	Salary	141, 146
Johnston, G. E.	Duty pay	122
do	Salary	109
Johnstone, J. K.	do	147
Johnstone, W. J.	Contingencies and Salary	144
Joliette Excise Division	do Salaries	112
do do	Distribution of Seizures	130
Jonas, H. & Co.	Contingencies	136
Jones, N. B.	Commission	121
Jones, R.	Salary	116, 144, 149
Jones, Siméon	Refunds	29, 30, 31, 33
" Journal (The)	Subscription	139
Journal of the Society of Chemical Industry. Subscription		139
Jubenville, J. P.	Salary	106, 111
Kane, J. R.	Contingencies	126
Kavanagh Bros.	do	140
Keegan, Mrs. J.	do	140
Keeler, G. H.	Duty pay	122
Keeler, G. S.	Salary	109
Keilty, Thomas.	do	109
Kellock, D.	do	109
Kelly, E.	Food Analysis	135
do	Salary	143
Kelly, Ed.	Contingencies	135
do	Culler's expenses	126
do	do fees	124
Kelly, John.	Contingencies	125
Kelly, Michael.	Culler's expenses	126
do	Culler's fees	124
Kelly, M. J.	Salary	142
Kenning, J. H.	do	111
Kenrick, E. B.	Contingencies	136
Keogh, P. M.	Duty pay	122
do	Salary	111
Kidd, Thos.	Food Analysis	135
King, R. M.	Salary	115
King's, N. B. Weights and Meas. Divis.	Contingencies and salaries	143
Kingston Excise District.	do do	116
do do Division.	do do	107-108

INDEX—*Continued.*

		PAGE.
Kingston Excise District.	Distribution of Seizures	130
do Gas District.	Contingencies and Salaries	146
do Weights and Measures Division	do do	141
" Kingston News "	Subscription	138
Kinnee, Daniel	Salary	142
Klee, Max	Refunds	36
Knight Joseph	Salary	148
Knowlson, J. B.	do	109
Korman, John	Refunds	26, 27, 28, 30, 31, 32
Kuntz Louis	do	27, 28, 30, 33
Labatt, John	do	27, 28, 32, 33
" Labour Advocate (The) "	Subscription	139
Laflamme, Joseph	Culler's annuity	127
Laidman, R. M.	Salary	141
Lamontagne, J. Bte.	Contingencies	140
Lanctot, Mrs.	do	128
Land Sales	Page 12. Details of	104-105
Lane, T. M.	Salary	113
Lang, Victor	do	108
Langlois, F.-X., dit Traversy	do	113
Langston, L.	Refunds	26
Laporte, G.	Salary	112
Laplante, E.	Cab-hire	140
LaRue, George	Minor expenditure	134
do	Salary	113
Lasalle, B.	Bill Stamps	16
Laurentides Pulp Co. (The)	Lessee	102
Law costs—Expenditure		120, 145
Lauder, John	Salary	111
Lawlor, H.	Contingencies	119
do	Salary	112
Lawlor, R. A.	do	114
Law Stamps—Distributor's account		16
" Leader (The) "	Advertising	134
do	Subscription	140
Lecourt, H. T.	Salary	112
Lee, E.	do	108
Lefebvre, F.-X.	do	135
Leighton, W. R.	do	116
Leighton, W. K.	do	144
Lemesurier, J.	Refunds	34, 35, 36
LeMoine, J.	Salary	113
LeMoine, J. M.	Contingencies and salary	116
Leonard, B.	do	125
Lépine, L.	Salary	113
Lépine, M.	Cab-hire	140
Leprohon, R. M.	Distribution of seizures	130
do	Salary	112
Lett, F. P. A.	do	108
Le Vasseur, N.	do	148
Lindberg, J.	Refunds	31, 32
Liquor License Act—Vote for		51
List of persons employed by the Inland Revenue Department		150-157
Listowell Gas District	Contingencies and salary	147
" Liverpool Times (The) "	Subscription	139
Lockquell, A. H.	Culler's annuity	127
Lockquell, L.	do	126
Logan, John	Salary	107
London Excise Division	Contingencies and salaries	108
do Gas District	do do	147
do Weights and Measures Division	do do	141
Looby, John	Salary	144
Lottridge, J. M.	Refunds	27, 28, 30, 33
Loudon, W. G.	Services	145
Lovell, John	Contingencies	128
Lowen & Erb	Refunds	26, 30
Luke, Jos.	do	31, 32
Lusignan, A.	Salary	137
Lyman, Sons & Co.	Contingencies	136, 149
Lynch, John	Culler's annuity	127
Lynch, P.	Salary	142

INDEX—*Continued.*

		PAGE.
Lynes, K.	Salary	106, 146
Lyons, Edward	do	106
Lyons, John	do	141
Lyons, T. J.	Refund	26
Macdonald, A. B.	Salary	109
Macdonald, D.	do	112
Macdonald, J. A.	do	141
Macdonell, A. D.	do	110
Macfarlane, A. C.	Services	136
Macfarlane, Thomas	Salary	135
do	Travelling expenses	135
MacIntire, D.	Salary	107
Mackay, G. W.	do	107
Macpherson, D.	Refunds	28, 29, 32, 33
Madden & Ellis	Contingencies	126
Magness, Robt.	Salary	141
Maguire, J.	Contingencies	126
"Mail (The)" Brandon	Subscription	139
"Mail (The)" Toronto	do	139
Malo, T.	Salary	112
Malone, J. C.	Culler's annuity	127
Malone, T.	Contingencies	128
do	Salary	128
Malone, Thomas, jun.	Culler's fees	124
Malone, Thomas, sen.	Culler's annuity	127
Malt—License fees		18
do Licenses issued, grain used, quantity produced		64
do do do Comparative statement for 1890-91		65
do Quantity taken for consumption		18
do Revenue		6
do Comparative statement, showing monthly increase or decrease for 1889-90 and 1890-91		24, 25
do —Refunds		26, 34
do Warehouse transactions		66, 67
Malt Liquor License fees		18
do Licenses issued, materials used, and quantity produced		70
do do do Comparative Statement, showing monthly increase or decrease for 1889 90 and 1890-91		24, 25
do Refunds		26
do Revenue		6
Manitoba Excise District	Contingencies and salaries	116
do Division	do	116
"Manitoba (Le)"	Subscription	139
Manning, J.	Salary	112
Manuf. in Bond—License fees		18
do Licenses issued, materials used, quantity produced		93
do do do Comparative for 1889-90 and 1890-91		95
do Quantity taken for consumption		18
do Revenue		6
do Revenue. Comparative Statement showing monthly increase or decrease for 1889 90 and 1890-91		24, 25
do Refunds		37
do Transactions in vinegar		94
do Warehouse transactions		95
do do do Comparative for 1889-90 and 1890-91		96
Marchand, N.	Salary	148
Marcon, F. E.	Duty pay	122
do	Salary	111
Marentette, A.	do	141
Marion, Eugène	do	112
Marsan, Rev. C. F.	Food analyses	136
Marshall, F.	Salary	109
Mason, F.	Duty pay	122
do	Salary	109
Mason, J.	do	114
Masuret, M.	Refunds	35, 36
Maury, Jonathan	Lessee	102
Medicine Hat "Times"	Advertising Inspection of Staples	134
Melanson, Sam.	Extra Services	118
Mercier & Co.	Advertising Inspection of Staples	134

INDEX—*Continued.*

		PAGE.
" Mère et l'Enfant (La) "	Subscription	139
Messner, F. X.	Refunds	27, 29, 31, 33
Metcalf, W. F.	Salary	111
Methylated Spirits—Statement showing expenditure. Vote for		51
do do	Net receipts	3
do do	Transactions in connection with manufacture of	50
do do	Quantity of raw material on hand at beginning and end of year, brought in and used during years 1890-91	97
Methylated Spirits—Statement showing quantity of raw material used, and methylated Spirits produced therefrom.		97
Methylated Spirits—Statement showing quantity of methylated spirits on hand at beginning and end of year, brought in, sold and otherwise accounted for during years 1890-91.		97
Miall, E.	Contingencies	118
do	Salary	137
do	Travelling expenses	138
Miller, A.	Contingencies and salary	148
Miller, E.	Duty pay	121
Miller, J. E.	Salary	116
Miller, Lock Co.	Contingencies	118
Miller & Son, M.	do	126
Miller. W. F.	Salary	107
Millet, Jas. E.	Refunds	27, 29, 30
Millier, E.	Salary	112
Milligan, R. J.	do	142
Milliken, E.	do	110
" Minerve (La) "	Subscription	138
Minister's salary—Vote for		51
Minor Expenditure, page 17. Details of		134
do Vote for		51
Minor Public Works—Revenue		13
do do Monthly deposits		20-23
Minor Revenues		13
do Vote for		51
" Miramichi Advance (The) "	Advertising	145
Molson, J. H. R.	Refunds	26, 31, 33
Moncton Gas District	Contingencies and salary	148
" Moniteur Acadien (Le) "	Subscription.	139
Montebello and St. Thomas d'Alfred	Ferry lessee	13
Montreal Culler's Office	Contingencies and salaries	127-129
do Excise District	do do	116
do do Division	do do	112, 113
do do do	Distribution of seizures	131
do Gas District	Contingencies and salaries	147
Montreal Post Office	do	128
Montreal Weights and Measures Div.	do and salaries	142
Moore, J. N.	Salary	116
Moore, T.	do	115
Moore, Wm.	do	108
Moorhouse, Miss M. E.	Extra services	138
Moreau, Alfred	Salary	142, 148
Morency, D.	Culler's annuity	127
" Morning Chronicle (The) "	Subscription	138
" Morning Herald "	do	139
Morris, D.	Refunds	26, 29, 31, 32
Morrisette, Joseph	Culler's annuity	126
Morrow, John	Contingencies and salary	116, 117
Mulhern, M. M.	Salary	106, 146
Munro, H. D.	do	115, 148
Munro, Wm.	Culler's annuity	127
Murphy, F.	Salary	109
Murphy, M.	Culler's annuity	127
Murphy, M.	Purchaser	104
Murphy, Thomas.	Culler's annuity	127
Murray, A. E.	Salary	110
Murray, D.	do	106, 111
Muskoka " Herald "	Subscription	139
Myrand, Louis.	Culler's annuity	127
McAdam, Thomas.	Purchaser	104
McAllister, A.	Salary	106

INDEX—*Continued.*

		PAGE.
McAlpin, E. A.	Refunds	35
McAlpin Tobacco Co. (The)	do	35
McCarthy, Miss. M. M.	Extra services	118
McCarthy, John	Refunds	28, 29, 31, 32, 33
McCarthy, John P.	Salary	137
do	Travelling expenses	138
McClanaghan, M.	Salary	112
McClive, J. M.	Distribution of seizures	130
McClive, J.	do	130
McCloskey, J. R.	Salary	114
McConville, J. N. A.	Law costs	120
McCormick, John.	Culler's annuity	127
McCoy, Wm.	Distribution of seizures	130
do	Salary	106
McCuaig, A. F.	do	106
McCullough, A.	do	137
McDonald, J. A.	Duty-pay	121
do	Salary	110
McDonald, John	do	141
McDonald, M. A.	do	114
McGill, A.	do	135
McGuire, F. J.	Commission	121
McInenly, Thomas.	Culler's annuity	127
McIntyre (Right Reverend Bishp.)	Lessee	102
McKay, John	Salary	143
McKay, J. & Co.	Lessee	102
McKay, James	Law costs	120
McKeand, J. C.	Lessee	102
McKendry, Daniel	Culler's expenses	126
do	Culler's fees	124
McKenzie, T. H.	Salary	141
McKimm, U. H.	do	109
McKinley & Northwood	Contingencies	136
McLaughlin, Thos.	do	137
McLeod, Col. J. F.	Bill stamps account	16
McLeod, E.	Law costs	120
McManus & Donnelly	Contingencies	126
McMannus & Ryan	do	126
McNamara, M.	Salary	113
McNaughton, John	Culler's annuity	127
McPeak, Wm.	Culler's expenses	126
do	Culler's fees	124
McPherson, A. F.	Salary	107
McPhie, D.	do	146
McPhie, L.	do	149
McRea, J.	Refunds	27, 28, 33
McSween, James	Salary	108
Napanee Gas District	Contingencies and salary	147
Nash, S. C.	Salary	115
"National (The)"	Subscription	138
Neelands, H.	Salary	108
Neilson, Geo. M.	Commission	121
Nettle, R.	Salary	137
New Brunswick Excise District	Contingencies and salaries	116
do Excise Division	do do	116
New Edinburgh and Gatineau Ferry	Lessees	13
"News (The)"	Subscription.	138
Niagara and Youngstown Ferry	Lessee	13
Nichols, J. T.	Salary	110
Noël, Eli	Culler's annuity	127
Nolan, J. C.	Purchaser	104
"Nord (Le)"	Subscription	138
"North Sydney Herald"	Advertising	145
do do	Subscription	139
"North-West Review (The)"	do	139
Nova Scotia and P.E.I. Excise District	Contingencies and salary	116
O'Brien, E. C.	Salary	115
O'Brien, J. F.	do	107
O'Brien, M.	Culler's expenses	126
do	Culler's fees	124
O'Brien, W. J.	Commission	121

INDEX—*Continued.*

		PAGE.
O'Connor, D.	Professional services	134
O'Donnell, J.	Salary	107
Oertling, L.	Contingencies	119 145
O'Flaherty, E. J.	Salary	112
O'Hanly, Miss F.	Extra work	118
O'Keefe, E.	Refunds	27, 29, 30, 32
Oland, J. C.	do	26, 28, 29, 30, 31, 32
Old Post Office Building, Hamilton (Lessee of)		13
do do Montreal (Lessee of)		13
Olivier, J. A.	Salary	143
O'Leary, T. J.	Duty-pay	121
do	Salary	110
O'Mullin, J. C.	Refunds	28, 29, 31, 32
Ontario Excise Districts	Contingencies and salaries	116
do Divisions	do	116
"Orillia Packet (The)"	Subscription	139
Orillia Weights and Measures Division	Contingencies and salaries	141
Ormston, Jno.	Commission	121
O'Sullivan, Miss M. A.	Extra work	118
Other receipts, revenue from		6
do do from monthly deposits		20 23
do do Comparative Statement showing monthly increase and decrease for 1889-90 and 1890-91		24-25
Ottawa Excise Division	Contingencies and salaries	108
do do	Distribution of seizures	130
do Gas District	Contingencies and salaries	147
do Weights and Measures Division	do do	141
Ouelette Street, Detroit Ferry lessee		13
Owen Sound Excise Division	Contingencies and salaries	108
do Gas District	do do	147
Panneton, G. E.	Salary	112
Papineauville and Brown's Wharf Ferry	Lessee	13
"Paris-Canada (Le)"	Subscription	139
Park, W. A.	Commission	121
Part of Building, Portland, N. B.	Lessee of	13
"Patrie (La)"	Subscription	139
Patry, Thomas	Culler's annuity	127
Patterson, A. C.	Salary	144
Patton, James	do	125
Peel, A.	Lessee	102
Pembroke and Allumette Island Ferry	do	13
Pennoyer, H. J.	Salary	113, 148
Percheron, A. D.	Refund	35
Perkins, G. A.	Salary	114
Perkins, Lyman	Lessee	102
Perley & Pattee	Lessees	102
Perry, G. L.	Salary	112
Persons employed by the Inland Revenue Department, list of		150-157
Perth Excise Division	Contingencies and salaries	109
Peterborough Excise Division	do do	109
do do	Distribution of seizures	130
do Gas District	Contingencies and salaries	147
Petit, J. B.	Salary	142
Petrie, J. & J.	Lessees	102
Petrie, Mrs.	Lessee	102
Petroleum Inspection Fees		18
do Number of packages inspected		90
do do do —Comparative statement of inspection fees for 1889-90 and 1890-91		91
do Revenue from Inspection Fees. Comparative Statement showing monthly increase or decrease for 1889-90 and 1890-91		24, 25
Philip Harris & Co.	Contingencies	136
Pictou Excise Division	do and salaries	115
do Weights and Measures Division	do do	143
Pierce & Co.	Lessee	102
Pile, T. G.	Commission	121
"Pilot Publishing Co. (The)"	Subscription	139
Pinsonneault, A.	Salary	112
Piper, Harry	do	142
Piquette, Ludger	Commission	121
Piuze, L. T.	Lessee	102

INDEX—*Continued.*

		PAGE.
“Planet (The)”	Subscription	139
Plant, B. R.	Extra services	137
Plummer, H.	Commission	121
Pole, C. W.	Salary	106
Port Arthur Excise Division	Contingencies and salary	109
Postmaster, Ottawa	Postage	140
Post Office Department	Bill stamps account	16
Potter, Chas.	Contingencies	118
Poupore, Télesphore	Law costs	120
Powell, Alex.	Purchaser	104
Powell, J. B.	Salary	106
Power, Richard	do	125
Power, Thos. A.	do	108
Prescott B. & M. Co.	Refunds	27, 28, 31, 33
Prescott Excise Division	Contingencies and salaries	109
Prescott and Ogdensburg Ferry	Lessee	13
Preventive Service	Contingencies and salaries	122
do	Vote for	51
Prince Edward Island Excise District	Contingencies and salary	116
Picard, Alfred	Refunds	37
Pritchard & Andrews	Contingencies	149
“Prix Courant (Le)”	Subscription	139
“Progress (The)”	Advertising	145
Provost, J. J.	Salary	143
Pruneau, Hector	Lessee	102
Purdie, S. A.	Salary	148
Quain, R.	do	137
Quebec Corporation	Contingencies	125
do Culler's Office	do and Salaries	125
do Excise District	do do	116
do Excise Division	do do	113
do do	Distribution of Seizures	131
do Gas District	Contingencies and Salaries	148
do Harbour Commissioners	Lessees	102
do Post Office	Contingencies	126
do Weights and Measures Division	do and Salaries	142
Queen's Printer	Lithographing	140
do	Printing	140
Quinn, J. D.	Duty pay	121
do	Salary	110
Racicot, C. G.	do	112
Rainy Lake Lumber Co. (The)	Lessee	102
Ramon, P.	Salary	111
Ramsay & Co., J. G.	Contingencies	136
Rancour, N.	do	125
Rankin, John	Lessee	102
Ratchford, C. E.	Commission	121
Rau, Joseph	Refunds	27, 28, 30, 33
Raw Leaf Tobacco, Quantity taken for	consumption	18
Ready, James	Refunds	25, 37
Reddan, C. J.	Duty pay	121
do	Salary	110
Reddin, Jas.	do	144
Refunds		26–37
Registrar, Exchequer Court	Contingencies	118
Reid, Estate of Robert	Purchaser	104
Reilly, J. S.	Salary	112
Reinhardt, C. S.	Refunds	26, 31
Reinhardt & Son. G.	do	29
Renaud, A.	Salary	14
Renaud, Joseph	Refunds	36
Rennie, G.	Salary	110, 147
Restigouche Ferry	Lessee	13
Revenue—Culling Timber		14
do Excise		6, 7
do Gas Inspection		39
do General		3
do Hydraulic and other Rents		12
do Law Stamps		39
do Methylated Spirits		50
do Minor Public Works		13

INDEX—*Continued.*

		PAGE.
Revenue—Monthly deposits		20-23
do Weights and Measures		39
"Review (The)"	Subscription	138
Ricard, W.	Cab-hire	140
Richard, D.	Salary	143
Richard, J. B. T.	do	112
Richelieu & Ont. Nav. Co.	Lessee	102
Ridgeway, Wm. (London, Eng.)	Subscription to sundry papers	139
Ritchie, D. & Co.	Refunds	34, 35, 36
Robidoux, Ferd.	Commission	121
Robins, P. M.	Salary	137
Robson, James	do	107
Roche, H. G.	Contingencies	136
do	Salary	147
Rochester, John	Lessee	102
Rockland and Lochaber Ferry	do	13
Rockliffe and Gatineau Point Ferry	do	13
Rogers, A.	Contingencies	125
Rogerson, J. M.	Salary	110
Ross, H. E.	do	144
Ross, S. F.	do	107
Rouleau, J.	do	113
Rowan, A.	do	148
Rowland, E.	do	108
Rowland, F.	do	107
Roy, J. A.	Refunds	27, 28, 30, 31, 32
Rudolph, Henry	do	27, 28, 33
Russell, W. W.	Salary	144
Ryan, John B.	do	143
Samuel, J. L.	Refunds	34, 35
Sarnia Gas District	Contingencies	147
Saucier, X.	Salary	115
Sault Ste. Marie Ferry	Lessee	13
"Scandinavian Canadian"	Subscription	139
School Trustees	Lessees	102
Schram, B.	Salary	110
Schwan, David	Refunds	27, 29, 31, 33
Scott, J. Philip	do	29, 31
"Scientific American"	Subscription	140
Scovil, W. B.	Salary	143
Scullion, J. W.	do	112
Seagram, J. E.	Refund	27, 30
Seagram, J. H. E.	do	33
Seath, D.	Rent	128
Sedgwick, R.	Contingencies	118
Seizures—Distribution of		130-133
do (Excise)—Recapitulation of		133
do (W.M.) do		133
do (Excise) Revenue		6
do do Comparative Statement showing monthly increase or decrease for 1889-90 and 1890-91		24, 25
do do Monthly deposits		20-23
do do Refunds		26-27
"Sentinel (The)"	Subscription	138
Sexton, J.	Salary	113
Shanacy, M.	do	110, 146
"Shareholder (The)"	Subscription	125, 139
Shaw & Co., C. S.	Contingencies	145
Shaw, J. F.	Salary	137
do	Travelling expenses	138
Shea, P.	Refunds	27, 29, 31, 32
Sherbrooke—Excise Division	Contingencies and salaries	113
do Gas District	do do	148
Simard, H.	Salary	142
Simpson, A. F.	do	113
Simpson, A. S.	Travelling expenses	135
Simpson, S. W.	Refunds	31
Sinon, E. H.	Duty-pay	122
do	Salary	106, 111
Skead, Hon. James	Lessee	102
Slattery, Ralph	Salary	108, 109

INDEX—*Continued.*

		PAGE.
Slattery, Thomas	Salary	141
Sleeman, George	Refunds	27, 28, 29, 30, 31, 33
Smyth, B. B.	Salary	114
Snuff—Quantity taken for consumption		18
Sorel Excise Division	Contingencies and salaries	113
do do	Distribution of seizures	132
do Gas District	Salaries	148
"Sorel News (The)"	Subscription	138
"Sorelois (Le)"	do	139
"Spectateur (Le)".	do	138
"Spectator (The)"	do	139
Spence. F. H.	Salary	110
Spence, John	Contingencies and salary	106
Spereman, J. J.	Duty-pay	122
do	Salary	106, 115
Spilling, M. E.	Refunds	36
Spirits—Distilleries transactions		58-59
do License fees		18
do Licenses issued, materials used and quantities produced		54-55
do do do do Comparative Statement for 1889-90 and 1890-91		56, 57
do Quantity taken for consumption		18
do Revenue		6
do do Comparative Statement showing monthly increase or decrease for 1889-90 and 1890-91		24-25
do do	Refunds	26
do Warehouse transactions		60-61
do do Comparative for 1889-90 and 1890-91		62, 63
Spragge, Chas. E.	Contingencies	145
Spratt, Joseph	Lessee	102
Sproule, W. H.	Contingencies	140
Stamps, Bill—Distributors' account		16
do Gas		16, 43-44
do Gas—Revenue		39
do Law. Commission allowed		44
do do Distributors' account		16, 44
do do Revenue		16, 39
do Weights and Measures—Destroyed or returned by distributors		40, 41
do do do Distributors' account		16, 40, 41
do do do Revenue		39
"Standard (The)"	Subscription	138
Standish, J. G.	Salary	112
Steel, Jas. J.	Refunds	27, 28, 31, 33
Stewart, James	Salary	108
Stone, J. G.	Distribution of seizures	132
Storr, A. M.	Contingencies	140
Strangman, Chas.	Refunds	27
Stratford Excise Division	Contingencies and salaries	110
do Gas District.	do do	147
Stratton, W. C.	do do	110
do	Distribution of seizures	130
do	Law costs	120
Street, A. F.	Commission	121
Sullivan, L. D.	Duty-pay	122
do	Salary	108
Sullivan, Timothy.	Purchaser	104
St. Basil Ferry	Lessee	13
St. Catharine's Excise Division	Contingencies and salaries	110
do do	Distribution of Seizures	130
St. Denis, M. L.	Services	137
St. Hyacinthe Excise Division	Contingencies and salaries	113
St. Johns' Excise Division	do salary	114
do do	Distribution of seizures	132
St. John, N. B. do	Contingencies and salaries	114
do do	Distribution of seizures	132
St. John Gas District	Contingencies and salary	148
do Weights and Measures Division	do do	143
St. Leonard and Van Buren Ferry	Lessee	13
Ste. Marie, L. C. A.	Salary	112
Tacey, John.	Refunds	36
Tansey, J. P. F.	Distribution of seizures	131

INDEX—*Continued.*

		PAGE.
Tansey, J. P. F.	Salary	112
Taylor, G. W.	Distribution of seizures	130
do	Salary	110
Taylor, H. J.	Refunds	29, 31, 33
Taylor, J. F.	Salary	108
Telegraph Company, C. P. R.	Contingencies	140
Telegraph Company, G.N.W.	do	140
Telephone Company.	do	140
Templeman, J.	Cab-hire	140
Terrebonne Excise Division.	Contingencies and salaries	114
do do	Distribution of seizures	132
Tétreau, N.	Lessee	102
Thomas, J. S.	Salary	141
Thomas, W. J.	Refunds	27, 29, 30, 37
Thomas, Robt.	Salary	111
Thompson, Abraham	Purchaser	104
Thompson, F. X.	Culler's annuity	127
Thompson & Perkins	Lessees	102
Thompson, Philip	do	102
Three Rivers Excise Division	Contingencies and salaries	114
do Gas District	do do	148
do Weights and Measures	do do	143
Thurso and Clarence Ferry	Lessees	13
Tierney & Donnelly	Contingencies	126
Till, T. M.	Salary	106
"Times (The)"	Subscription	139
"Times (The)," Prince Albert	do	138
Tobacco—Canadian Twist—Commission on sale of stamps for		121
do do do	do Vote for	51
do do	Comparative Statement for 1889-90 and 1890-91	81
do do	Quantity taken for consumption	18
do do	Revenue account	6
do License fees		18
do do issued, materials used, quantity produced		72, 73
do do do	Comparative Statement for 1889-90 and 1890-91	74, 75
do Quantity taken for consumption		18
do Raw leaf taken for consumption		18, 19
do do Warehouse transactions		77, 78
do do do	Comparative Statement for 1889-90 and 1890-91	79, 80
do Revenue		6
do do Comparative Monthly Statement showing monthly increase or decrease for 1889-90 and 1890-91.		24, 25
do do Refunds		26-37
do do Warehouse transactions		77
do do do	Comparative Statement for 1889-90 and 1890-91	78
do Snuff—Quantity taken for consumption		18
do do Warehouse transactions		77
do do do	Comparative Statement for 1889-90 and 1890-91.	78
do Stamps—Commission—Vote for		51
Todd, Martin N.	Refunds	29, 33
Todd, M. R.	do	28
Tomlinson, W. M.	Salary	142
Tompkins, P.	Duty-pay	122
do	Salary	115
Tremaine, L. E.	do	143
Toronto, B. & M. Co.	Refunds	27, 29, 30, 33
do Excise District	Contingencies and salaries	116
do do Division	do do	110
do do do	Distribution of seizures	130
do Gas District	Contingencies and salary	147
do Weights and Measures Division	do do	142
"Toronto World (The)"	Advertising	145
Toupin, F. X. J. A.	Salary	112
Tourchot, A. L.	Food analysis	136
"Trade Review (The)"	Subscription	138
Tremain, L. E.	Salary	143
"Tribune (The)"	Subscription	138
Tucker & Reeves	Contingencies	118
Tuckett, Geo. T.	Refunds	34, 35, 36
Tuckett & Son, Geo. T.	do	35
Tuckett & Sons, John E.	do	34

INDEX—*Continued.*

		PAGE.
Turgeon, P. L.	Contingencies	126
" Union Standard "	Subscription	140
" United Canada "	Advertising	145
do	Subscription	139
Urquhart, J. R.	Salary	142
Vachon, J. B.	Culler's annuity	127
Valade, F. X.	Food analysis	135
Valin, Ernest	Services	118
" Vallée d'Ottawa (La) "	Subscription	139
Vancouver Excise Division	Contingencies and salaries	116
Verrault, Edward	Culler's annuity	127
Verner, F.	Salary	112
Victoria Excise Division	Contingencies and salaries	116
do do	Distribution of seizures	132
do Gas District	Contingencies and salaries	149
do Weights and Measures Division	do do	144
Villeneuve, J.	Salary	112
do	Culler's annuity	127
Vinegar, Statement showing transactions in bonded manufactories		94
Vincent, J. L.	Distribution of seizures	131
do	Salary	112
" Volksblatt "	Subscription	138
Wainwright, F. G.	Salary	115
Walker, F. H.	Refunds	27, 29, 31, 32
Wallace, G. H.	Commission	121
Wallace & Sons	Contingencies	149
Waller, J.	Salary	108
Walsh, D. J.	do	110
Walsh, M.	Contingencies	145
Walsh, M. F.	Cab-hire	140
do	Salary	137
Walsh, Wm.	Culler's annuity	127
Watkins, J. A.	Distribution of seizures	130, 131
do	Salary	112
Watson, J.	do	135
Webb, Thomas	Lessee	102
Webb, Adder Co.	Contingencies	118
Webster, Thomas	Food analysis	135
do	Salary	106
do	Travelling expenses	135
Webster & Co., J. M.	Contingencies	125
"Week (The)"	Subscription	139
"Weekly Despatch (The)"	Advertising	134
Wells, Henry	Refunds	27
Weights and Measures—Deputy Inspectors' account (old divisions)		42
do	Expenditure (old divisions)	47
do	do Page 4, 5, details of	141-145
do	do Vote for	51
do	Inspectors' account	40
do	Revenue	39
do	do Monthly deposits	20-23
Weir, Jas.	Duty-pay	122
do	Salary	111
Weir, J. P.	Contingencies	118
" West Lorne Herald (The) "	Subscription	140
" Western World (The) "	do	140
" Western Union (The) "	do	140
Westman, Thomas	Salary	110
" Weston Times (The) "	Subscription	139
Weyms, C.	Salary	110
Wheatley, A. E.	do	141
Whelan, W. F.	do	125
Whitehead, Mr. J.	Contingencies	136
Whitteker, Wm.	Salary	141
Wickwire, W. N.	Refunds	26, 28, 29, 30, 31, 32, 33
Williams, E. E.	do	29, 33
Williams, G.	Salary	116
Williamson, A. W.	Commission	121
Wills, Edgar A.	Inspection of staples	134
Wilmot, John B.	Salary	314
Wilson, D.	do	108

INDEX—*Concluded.*

		PAGE.
Wilson, M. S.	Refunds	27, 31, 33
Wilson, W. C.	Commission	121
Wilson, W. J.	Contingencies	118
Windsor Excise District	do and salaries.	116
do do Division	do do	111
do Weights and Measures Division	do do	142
Winnipeg Excise Division	do do	115
do do	Distribution of seizures	132
do Gas District	Contingencies and salary	148
do Weights & Measures Division	do do	144
do do do	Distribution of seizures	132
Winslow, A.	Refunds	28, 29, 32, 33
Winslow, M. S.	do	28
Winslow, Ambr. B. & M. Co.	do	29
Winter, A. W.	Salary	110
Wischer, E. R.	Contingencies	136
Wiser, J. P.	do	119
Wiser & Son, J. P.	Refunds	27, 31, 33
Woodward, G. W.	Salary	106
"World (The)"	Subscription	138
"World"	do	139
Wright, Alex., & Co.	Contingencies	149
Wright, R. J.	Salary	142
Yarmouth Weights & Measures Division	Contingencies and salary	144
"Yarmouth Times (The)"	Advertising	145
do	Subscription	139
Yates, J. M.	Salary	108
Young, Levi	Lessee	102

REPORT, RETURNS AND STATISTICS

OF THE

INLAND REVENUES

OF THE

DOMINION OF CANADA

FOR THE

FISCAL YEAR ENDED 30th JUNE

1891

PART II

INSPECTION OF WEIGHTS AND MEASURES AND GAS

Presented to both Houses of Parliament by Command of His Excellency.

JOHN COSTIGAN,
Minister of Inland Revenue.

PRINTED BY ORDER OF PARLIAMENT

OTTAWA:
PRINTED BY S. E. DAWSON, PRINTER TO THE QUEEN'S MOST
EXCELLENT MAJESTY
1892

[*No.* 6*a*—1891.] *Price* 5 *cents.*

REPORT

OF THE

COMMISSIONER OF INLAND REVENUE

ON THE

INSPECTION OF WEIGHTS AND MEASURES AND GAS.

To the Honourable
The Minister of Inland Revenue.

SIR,—I have the honour to submit herewith my annual report on the inspection of weights and measures and gas, with the usual statements in relation thereto, for the year ended 30th June, 1891.

1. The total revenue collected during the year for the inspection of weights and measures was $33,662.23, as against $40,438.88 collected during the year ended 30th June, 1890.

The total expenditure was $72,305.22, as against $69,144.76 expended during the year ended 30th June, 1890.

2. Appendix " A " gives a summary statement of the expenditure and receipts of each inspection division.

3. In appendices " B," " C " and " D " will be found a detailed statement of weights, measures and weighing machines presented for verification, verified and rejected during the year. The number of all descriptions may be summarily stated as follows:—

—	Presented.	Verified.	Rejected.	Percentage of Rejections.
Weights, Dominion	73,179	72,973	206	0·28
Measures of capacity, Dominion	81,624	81,111	513	0·63
Lineal measures	4,919	4,852	67	1·36
Balances, equal arms	12,030	11,923	107	1·88
do steelyards	3,236	3,197	39	1·20
do platform scales	21,104	20,716	388	1·83
Irregular weights	4,009	3,955	54	1·34
do measures	459	459	....	....
Troy weights	45	45	....	....

4. Since the date of my last report, Mr. Johnstone, Chief Inspector of Standards, has visited the Montreal, Toronto, Hamilton, London, Windsor and Orillia Weights and Measures Divisions, and inspected the offices, books, standards, &c., of the several offices, and carefully adjusted, verified and stamped the whole of the 50 lbs. iron standards in use in the Hamilton and Windsor Divisions.

5. I beg leave to call your attention to the fact that many of the weights of our portable kits are very much out of adjustment. Years of constant use and wear and tear have rendered them so seriously incorrect that our officers complain of them, and declare that they are really unfit to be used as standards, and that their continued use as such must result in serious injury to the weights and weighing machines of the whole Dominion. As long as there were unused correct sets of weights in stock in the department they were exchanged with the inspectors for condemned sets, but at present there are none in stock that can be sent out until they have been adjusted. I have before urged to be allowed the services of a mechanic competent to undertake such delicate work as the adjustment of standards. I regret to say that the department is still unsupplied. The necessity for the employment of a competent adjuster is really urgent, and demands careful consideration and prompt action. The desire to economize may go so far as to render the large expenditure already incurred nugatory.

6. The Chief Inspector reports favourably of the manner in which he found the work of inspection progressing. The Act continued to work satisfactorily, except on one or two points,—mainly the want of uniformity in the practice of inspecting officers, especially in first or original inspections of weights, measures and weighing machines in the manufactories where they are made.

7. Manufacturers of weighing machines complain bitterly of this want of uniformity, and suggest a simple remedy, which they claim would effectually do away with the trouble so long complained of, and be at the same time the means of establishing a uniformity in the practice of local inspectors, and thereby help to ensure the manufacture of a better class of weights, measures and weighing machines, especially the latter.

8. The remedy suggested is simply to appoint a competent mechanic to periodically visit the manufactories of weights, measures and weighing machines and there explain to the local inspectors what constitutes, as regards materials, workmanship and finish, a first class article, and the proper method of testing the same. Manufacturers further say that there need be no new appointment made to carry out their suggestion, as they claim that we need have no trouble in selecting from our staff of inspectors and assistants an officer intelligent and competent enough to act as an inspector of local inspectors in manufactories.

9. The inspection in manufactories should invariably be conducted with the greatest possible care, and no article should be allowed to pass until every tittle of the requirements of the regulations had been fully complied with.

10. This much needed carefulness and uniformity of inspection can only be secured by some such means as are above suggested.

11. I consider the foregoing suggestions of the manufacturers well worthy of the careful consideration of the department. It would, in my opinion, be a simple and inexpensive way to ensure the best results.

INSPECTION OF GAS.

12. The total revenue collected during the year for the inspection of gas and gas meters was $7,947.90, as compared with $8,485.80 collected during the year ended 30th June, 1890.

13. The total expenses were $19,933.71, as against $19,082.03 expended during the year ended 30th June, 1890.

14. Appendix "F" gives a summary statement of the expenditure and receipts of each gas inspection district.

15. The details of gas meter inspection will be found in Appendix "G." The result as compared with last year may be stated as follows:—

	Presented for verification.	Finally rejected.
1889–90	10,676	208
1890–91	9,679	195

ILLUMINATING POWER.

16. A statement of the illuminating power and purity of gas inspected during the year will be found in Appendix "H."

The illuminating power, where inspection has been made, has been as follows:—

Places.	Number of Tests made.	Number of times below Standard	Places.	Number of Tests made.	Number of times below Standard
Belleville	42	0	St. Thomas	12	0
Brockville	6	0	Toronto	105	0
Brantford	12	0	Windsor	12	0
Chatham	8	0	Woodstock	12	0
Cobourg	11	0	Montreal	103	0
Cornwall	10	0	Quebec	11	0
Dundas	12	0	Sherbrooke	10	0
Galt	12	0	Chatham, N.B.	25	0
Guelph	12	0	Fredericton	12	0
Hamilton	12	0	St. John	77	0
Ingersoll	12	0	Moncton	14	0
Kingston	49	0	Halifax	21	0
Lindsay	11	0	Pictou	12	0
Listowel	12	0	Yarmouth	11	0
London	36	0	Charlottetown	36	0
Napanee	12	0	Winnipeg	12	0
Ottawa	24	0	Victoria, B.C.	26	0
Peterborough	11	0	Barrie	10	0
Port Hope	12	0	Berlin	7	0
Stratford	8	0	Owen Sound	12	0
St. Cathrines	12	0	Sarnia	9	0

TESTS FOR PURITY.

17. Gas has been tested for sulphur and ammonia only at Ottawa, Toronto, Montreal, Quebec, St. John and Halifax.

18. In Ottawa the total number of tests made was:—

For sulphur, 24 tests, never in excess.

For ammonia, 24 tests, 12 times in excess.

For sulphuretted hydrogen, 26 tests, never present.

19. In Toronto:—
For sulphur, 24 tests, never in excess.
For ammonia, 24 tests, never in excess.
For sulphuretted hydrogen, 105 tests, never present.

20. In Montreal:—
For sulphur, 35 tests, 5 times in excess.
For ammonia, 35 tests, never in excess.
For sulphuretted hydrogen, 105 tests, once present.

21. In Quebec:—
For sulphur, 23 tests, once in excess.
For ammonia, 23 tests, never in excess.
For sulphuretted hydrogen, 19 tests, never present.

22. In St. John, N.B.:—
For sulphur, 44 tests, 6 times in excess.
For ammonia, 44 tests, never in excess.
For sulphuretted hydrogen, 77 tests, never present.

23. In Halifax:—
For sulphur, 20 tests, never in excess.
For ammonia, 20 tests, never in excess.
For sulphuretted hydrogen, 22 tests, never present.

24. In addition to the foregoing, tests for sulphuretted hydrogen have been made at each of the following places where illuminating power has been tested, with the following results:—

Places.	Number of Tests.	Present.
Belleville	42	3
Brantford	12	0
Brockville	6	0
Chatham	11	0
Cobourg	11	0
Cornwall	10	0
Dundas	12	0
Galt	12	0
Guelph	12	0
Hamilton	12	0
Ingersoll	12	1
Kingston	49	0
Lindsay	11	0
Listowel	12	0
London	36	0
Peterborough	11	1
Port Hope	12	0
Sarnia	9	0
Stratford	8	0
Stratford, 2nd	8	0
St. Thomas	12	0
St. Catharines	12	0
Windsor	12	0
Woodstock	12	2
Sherbrooke	10	0
Chatham, N.B.	25	0
Fredericton	12	0
Moncton	14	0
Pictou	12	0
Yarmouth	11	0
Charlottetown	36	0
Winnipeg	12	0
Victoria, B.C.	26	0
Barrie	10	0
Berlin	7	0
Owen Sound	12	0
Napanee	12	0

REPORT OF PROGRESS.

25. Since the date of my last report we have had two 10-feet meter-provers and two Aubin photometers made, and three old 10-feet meter-provers re-lined and otherwise thoroughly repaired. The gas inspection office in Cobourg was removed to commodious quarters in the Government building there, one of the new meter-provers

was set in place, and the office fitted up in first class style. The meter-prover formerly used in the Cobourg office was re-lined and otherwise put in thorough repair and set up in the Port Hope office, which was generally overhauled and left in good order.

26. The Belleville gas inspection office was thoroughly overhauled, a new meter-prover was set up, the photometer repaired and everything in connection with the office fitted up in first class style.

27. The apparatus was removed from the old office at Windsor to the basement of the post office there, where after being thoroughly repaired it was set up, making one of the most complete and convenient gas inspection offices we have. A re-lined meter-prover was set in place here, and the old one sent to Hamilton to be re-lined.

28. A full set of standard gas inspection apparatus was recently destroyed by fire at St. John, N.B., to replace which a full set, less the apparatus for making the sulphur and ammonia tests, has been shipped from stock at Hamilton, leaving in stock at present only the old meter-prover removed from the Windsor office, and one Aubin photometer.

29. Gas inspection is asked for at Deseronto, Simcoe and Brampton. In the event of the department's deciding to fit up offices there, two full sets of apparatus would be required in addition to the above named set now in stock . When ordering apparatus to meet the above requirements, it would, in my opinion, be advisable to order a spare set to have on hand to meet any emergency that might arise, such, for example, as that which has so recently arisen in the case of the St. John fire.

30. The whole work of construction of the new, and the re-lining and repairing of the old apparatus, as well as the refitting of the offices aforesaid, was done under the supervision of Mr. Inspector McPhie, of Hamilton, to whom much credit is due for the admirable manner in which the work was performed.

31. In connection with his recent tour of inspection, Mr. Johnstone further reports that he found the managers of gas companies generally complaining of what they claim to be an injustice on the part of the Government in compelling gas producers to submit to the inspection of their meters and of the illuminating power and purity of their gas, while electric light companies are allowed to sell their light without Government inspection of any kind, either as to its measurement or illuminating power. It does seem to be unfair on the part of the Government to insist on such rigid inspection of gas, and at the same time permit the sale of electric light without Government inspection. Consumers will doubtless soon take up the question, and for their own protection demand inspection of electric light. In the face of this fact, would it not be advisable for the department to take such preparatory steps as would enable it to be in a position to take up and deal intelligently with the question when it is presented for consideration ?

32. Even this preliminary work, however, requires money, and cannot be undertaken unless provision is made in the Estimates for a sum adequate to employ temporary expert assistance. I would therefore recommend that $1,000 be placed in the Estimates for this purpose.

Respectfully submitted,

E. MIALL,

Commissioner.

APPENDICES.

APPENDIX A.

STATEMENT of the Weights and Measures Expenditure and Receipts for Year ended 30th June, 1891.

Inspection Divisions.	Inspectors and Assistants.	Expenditure.							Receipts.
		Salaries.	Seizure Expenses.	Special Assistance.	Rent.	Travelling Expenses.	Sundries.	Total.	
Province of Ontario.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Belleville	Johnson, Wm Slattery, Thomas Irvin, Samuel	2,300 00			100 00	336 08	208 53	2,944 61	1,300 02
Hamilton	McKenzie, T. H. McDonald, John Marentette, A. Beattie, Thomas Magness, Robert Laidman, R. M. Wheatley, A. E Fitzgerald, E. W	4,989 19		366 88		835 39	174 55	6,366 01	7,359 60
Kingston	Macdonald, J. A. Griffin, W. W Whitteker, W	2,400 00			90 00	489 33	380 55	3,359 88	1,567 99
London	Egan, J Coughlin, D Thomas, J. S	2,500 00				575 74	140 40	3,216 14	2,050 28
Orillia	Bolster, Geo. J Lyons, John	1,800 00				384 57	37 48	2,222 05	1,185 31
Ottawa	Code, A. Cosgrove, John Gorman, M Lynch, P	3,000 00			200 00	499 72	159 92	3,859 64	1,316 30

Toronto	Piper, A. Milligan, R. J. Kinnee, D. Wright, R. J.	3,350 00	1 75	214 00	.....	676 27	126 51	4,368 53	3,044 55
Windsor	Hayward, W. J Hughes, R. A	1,800 00	6 05	.....	.....	1,042 57	47 14	2,895 76	2,258 63
	District Inspector	.....	.....	.....	.....	24 40	.....	24 40	.....
		22,139 19	7 80	580 88	390 00	4,864 07	1,275 08	29,257 02	20,082 68
Province of Quebec.									
Montreal	Chalut, J. O. Daoust, J. A. Dorion, G. T. Dillon, S. Richard, J. M. Baker, J. S. Tomlinson, W. M Urquhart, J. R. Gervais, S. Desrivières, F. L.	6,638 81	.....	.....	.....	833 55	243 64	7,716 00	6,790 52
Quebec	Bourassa, P. E. Kelley, M. J. Adams, W. C Chabot, F. X. Petit, J. B. Simard, H. Moreau, A.	3,655 36	.....	.....	.....	669 39	67 58	4,392 33	1,359 64
Three Rivers	Olivier, J. A. Provost, J. J Bruneau, P. C. A.	2,200 00	.....	.....	.....	256 40	29 77	2,486 17	1,238 23
		12,494 17	.....	.....	.....	1,759 34	340 99	14,594 50	9,388 39

APPENDIX A.—*Continued.*

STATEMENT of Expenditure and Receipts for the Year ended 30th June, 1891—*Continued.*

Inspection Divisions.	Inspectors and Assistants.	Expenditure.							Receipts.
		Salaries.	Seizure Expenses.	Special Assistance.	Rent.	Travelling Expenses.	Sundries.	Total.	
Province of New Brunswick.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Fredricton	Freeze, E. C Bois, George A	1,600 00	....	....	....	157 31	12 55	1,769 86	209 51
King's	Scovil, W. B. Richard, D.	1,400 00	....	....	....	279 01	16 46	1,695 47	564 89
St. John	Wilmot, J. B. Cowan, E.	1,800 00	....	....	....	60 52	7 45	1,867 97	653 40
		4,800 00	....	....	....	496 84	36 46	5,333 30	1,427 80
Province of Nova Scotia.									
Cape Breton	Tremaine, L. E	800 00	....	....	70 00	93 09	80 27	1,043 36	230 26
Halifax	Ryan, J. B. Kelly, Edward.	1,500 00	....	....	300 00	46 61	200 85	2,047 46	552 78
Pictou	McKay, John Chisholm, J. J	1,400 00	....	....	....	320 18	38 26	1,758 44	295 08
Yarmouth	Allison, Charles	1,000 00	....	....	....	41 10	13 70	1,054 80	44 50
		4,700 00	....	....	370 00	500 98	333 08	5,904 06	1,122 62

Province of Prince Edward Island.									
Charlottetown	Reddin, James	1,200 00	1 31	69 96	....	183 24	130 67	1,585 18	366 91
Province of Manitoba.									
Winnipeg	Huggard, R. T. Cowley, W. Costello, W. Ross, H. E. Paterson, A. C. Russell, W. W. Girdlestone, R. J. M. Looby, John	4,703 20	....	....	108 00	499 93	69 75	5,380 88	934 90
	District Inspector	....	....	....	....	306 40	....	306 40	....
		4,703 20	....	....	108 00	806 33	69 75	5,687 28	934 90
Province of British Columbia.									
Victoria	Jones, R. Findley, A. Leighton, W. K	1,531 10	....	....	210 00	333 20	105 60	2,179 90	338 93

RECAPITULATION.

Ontario	22,139 19	7 80	580 88	390 00	4,864 07	1,275 08	29,257 02	20,082 68
Quebec	12,494 17	....	....	....	1,759 34	340 99	14,594 50	9,388 39
New Brunswick	4,800 00	....	....	....	496 84	36 46	5,333 30	1,427 80
Nova Scotia	4,700 00	....	....	370 00	500 98	333 08	5,904 06	1,122 62
Prince Edward Island	1,200 00	1 31	69 96	....	183 24	130 67	1,585 18	366 91
Manitoba	4,703 20	....	....	108 00	806 33	69 75	5,687 28	934 90
British Columbia	1,531 10	....	....	210 00	333 20	105 60	2,179 90	338 93
General Contingencies	2,000 00	....	....	....	476 15	3,782 07	6,258 22	....
Queen's Printer	....	....	....	....	....	576 37	576 37	....
Stationery Office	....	....	....	....	....	914 39	914 39	....
Lithographing, &c	....	....	....	....	....	15 00	15 00	....
Grand Total	53,567 66	9 11	650 84	1,078 00	9,420 15	7,579 46	72,305 22	33,662 23

APPENDIX

Return of Weights and Measures Inspected during the Fiscal Year
cation, Verified and Rejected, for each Division, for

Name of Inspection Office.	Weights.								Mea
	Dominion.			Troy.		Irregular.			
	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.	Verified.	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.
Ontario.									
Belleville	2,295	2,295	....	....	.	235	235	....	1,537
Hamilton	14,526	14,512	14	..	....	284	280	4	5,373
Kingston	2,264	2,148	116	..	....	159	127	32	7,692
London	1,510	1,510	...	....	....	80	80	....	12,031
Orillia	1,631	1,631	....	....	...	86	86	...	1,286
Ottawa	2,418	2,411	7	....	...	189	187	2	2,243
Toronto	6,195	6,195	....	11	11	44	44	....	10,957
Windsor	3,813	3,794	19	....	....	260	258	2	1,903
	34,652	34,496	156	11	11	1,337	1,297	40	43,022
Quebec.									
Montreal	19,738	19,736	2	34	34	826	817	9	19,973
Quebec	6,438	6,437	1	....	....	856	854	2	3,817
Three Rivers	3,908	3,908	...	....	....	348	345	3	4,362
	30,084	30,081	3	34	34	2,030	2,016	14	28,152
New Brunswick.									
Fredericton	424	424	....	....	....	50	50	...	641
King's	1,172	1,172	....	....	....	151	151	....	1,230
St. John	1,041	1,041	....	....	....	123	123	...	4,114
	2,637	2,637	....	....	...	324	324	....	5,985
Nova Scotia.									
Cape Breton	398	398	...	....	....	32	32	....	480
Halifax	1,445	1,445	....	...	....	225	225	....	1,500
Pictou	267	267	....	....	....	22	22	....	768
Yarmouth	45	45	...	...	....	4	4	....	99
	2,155	2,155	....	....	....	283	283	....	2,847
Prince Edward Island.									
Charlottetown	641	641	....	....	....	33	33	....	259
Manitoba.									
Winnipeg	2,514	2,467	47	....	....	1	1	....	1,230
British Columbia.									
Victoria	496	496	....	....	.. .	1	1	....	129

B.

ended 30th June, 1891, showing the Total Number brought for Verification each Province, and for the whole Dominion.

SURES OF CAPACITY.				MEASURES OF LENGTH.			BALANCES, &c.								
Dominion.		Irregular.					Equal Armed.			Steelyards.			Platform Scales, Weigh Bridges, &c.		
Verified.	Finally Rejected.	Brought for Verification.	Verified.	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.	Verified.	Finally Rejected.
1,537	....	....	....	34	34	....	384	384	....	89	89	....	922	922	....
5,361	12	1	1	236	235	1	3,041	3,028	13	1,397	1,394	3	5,072	4,995	77
7,302	390	....	....	160	150	10	386	332	54	47	25	22	1,097	971	126
12,030	1	....	....	......	......	....	254	252	2	72	70	2	967	943	24
1,286	...	....	....	272	255	17	286	286	....	80	79	1	815	811	4
2,239	4	....	....	218	218	....	361	361	....	20	20	....	996	994	2
10,957	....	2	2	686	686	....	919	919	....	392	392	....	1,617	1,617	...
1,903	....	....	...	182	182	....	655	654	1	97	96	1	1,687	1,655	32
42,615	407	3	3	1,788	1,760	28	6,286	6,216	70	2,194	2,165	29	13,173	12,908	265
19,959	14	22	22	1,972	1,953	19	2,955	2,954	1	792	790	2	3,998	3,921	77
3,816	1	....	...	630	622	8	992	991	1	55	52	3	510	508	2
4,302	60	....	....	315	304	11	606	577	29	27	24	3	629	612	17
28,077	75	22	22	2,917	2,879	38	4,553	4,522	31	874	866	8	5,137	5,041	96
641	..	....	....	1	1	....	69	69	...	7	7	....	164	164	...
1,227	3	....	....	8	8	....	218	218	...	38	38	....	422	418	4
4,114	.	8	8	7	7	....	191	191	....	8	8	...	324	324	....
5,982	3	8	8	16	16	....	478	478	....	53	53	....	910	906	4
480	.. .	....	....	51	51	....	83	82	1	5	5	....	158	155	3
1,498	2	424	424	19	19	....	238	238	....	15	15	....	350	350	.. .
759	9	...	....	66	65	1	100	98	2	10	10	....	268	263	5
99	....	2	2	13	13	...	9	8	1	19	19	....	32	32	....
2,836	11	426	426	149	148	1	430	426	4	49	49	....	808	800	8
259	....	....	....	9	9	...	114	114	....	3	3	....	285	285	....
1,213	17	....	....	29	29	....	97	95	2	30	28	2	436	421	15
129	....	....	...	11	11	....	72	72	....	33	33	....	355	355	....

APPENDIX

RETURN of Weights and Measures Inspected during the Fiscal Year cation, Verified and Rejected for each Division, for

RECAPITU

—	Weights.								Mea
	Dominion.			Troy.		Irregular.			
	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.	Verified.	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.
Ontario	34,652	34,496	156	11	11	1,337	1,297	40	43,022
Quebec	30,084	30,081	3	34	34	2,030	2,016	14	28,152
New Brunswick	2,637	2,637	....	....	...	324	324	....	5,985
Nova Scotia	2,155	2,155	....	....	....	283	283	....	2,847
Prince Edward Island	641	641	....	....	..	33	33	..	259
Manitoba	2,514	2,467	47	....	....	1	1	....	1,230
British Columbia	496	496	....	....	...	1	1	....	129
Total	73,179	72,973	206	45	45	4,009	3,955	54	81,624

B—*Concluded.*

ended 30th June, 1891, showing the Total Number brought for Verifi-
each Province, and for the whole Dominion.

LATION.

SURES OF CAPACITY.				MEASURES OF LENGTH.			BALANCES, &c.								
Dominion.		Irregular.					Equal Armed.			Steelyards.			Platform Scales, Weigh Bridges, &c.		
Verified.	Finally Rejected.	Brought for Verification.	Verified.	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.	Verified.	Finally Rejected.
42,615	407	3	3	1,788	1,760	28	6,286	6,216	70	2,194	2,165	29	13,173	12,908	265
28,077	75	22	22	2,917	2,879	38	4,553	4,522	31	874	866	8	5,137	5,041	96
5,982	3	8	8	16	16	....	478	478	....	53	53	....	910	906	4
2,836	11	426	426	149	148	1	430	426	4	49	49	....	808	800	8
259	....	....	...	9	9	....	114	114	....	3	3	....	285	285	....
1,213	17	....	....	29	29	....	97	95	2	30	28	2	436	421	15
129	....	....	....	11	11	....	72	72	...	33	33	....	355	355	....
81,111	513	459	459	4,919	4,852	67	12,030	11,923	107	3,236	3,197	39	21,104	20,716	388

APPENDIX

Return showing the Number of Dominion Weights and Lineal Mesures during the Fiscal Year

Division.	Dominion											
	Avoir											
	60 lbs.	50 lbs.	30 lbs.	20 lbs.	10 lbs.	5 lbs.	3 lbs.	2 lbs.	1 lb.	8 ozs.	4 ozs.	2 ozs.
Ontario.												
Belleville	....	....	....	....	4	61	163	402	404	309	292	249
Hamilton	...	1	....	....	....	459	2,003	3,454	2,914	1,326	1,134	1,098
Kingston	....	6	...	5	7	78	172	380	378	311	267	247
London	....	....	....	....	...	19	105	319	293	185	162	153
Orillia	....	....	....	....	....	26	115	297	278	208	195	183
Ottawa	....	4	...	1	4	82	171	427	417	330	309	275
Toronto	....	....	....	....	21	172	694	1,072	1,061	787	639	609
Windsor	...	....	....	....	....	58	252	741	678	478	435	408
	...	11	....	6	36	955	3,675	7,092	6,423	3,934	3,433	3,222
Quebec.												
Montreal	2	48	4	8	55	1,046	1,710	3,023	3,023	2,632	2,511	2,310
Quebec	....	50	29	68	155	388	441	977	952	913	847	704
Three Rivers	....	25	1	5	14	271	346	668	655	603	526	400
	2	123	34	81	224	1,705	2,497	4,668	4,630	4,148	3,884	3,414
New Brunswick.												
Fredericton	....	....	....	....	...	12	13	97	87	63	56	48
King's	....	20	2	4	6	50	65	303	224	156	124	105
St. John	....	....	...	...	...	44	10	265	194	162	132	107
	....	20	2	4	6	106	88	665	505	381	312	260
Nova Scotia.												
Cape Breton	....	....	...	...	2	20	39	111	92	39	32	27
Halifax	....	10	....	..	1	58	60	371	293	211	175	136
Pictou	....	2	1	....	...	3	16	60	60	28	28	26
Yarmouth	...	....	....	....	....	2	2	12	11	6	5	3
	....	12	1	....	3	83	117	554	456	284	240	192
Prince Edward Island.												
Charlottetown	....	...	....	....	....	12	29	180	132	79	67	64
Manitoba.												
Winnipeg	....	....	...	1	71	315	422	757	551	169	75	62
British Columbia.												
Victoria	....	....	....	....	....	6	28	87	81	72	62	64

C.

of each Denomination presented for Verification in each Inspection Division ended 30th June, 1891.

WEIGHTS.									LINEAL MEASURES.							
dupois.							Troy Weights Presented.	Irregular Weights Presented.								
1 oz.	8 drs.	4 drs.	2 drs.	1 dr.	½ dr.	Total Number Presented.			Yard.	½ Yard.	2 Feet.	5 Feet.	12 Feet.	100 Ft. Chains.	66 Ft. Chains.	Total Number Presented.
212	146	35	12	5	1	2,295	...	235	31	....	1	1	1	.....	.....	34
1,076	841	208	10	2	....	14,526	.....	284	224	...	....	.....	....	......	12	236
200	129	53	22	8	1	2,264	...	159	160	....	...	.....	....	....	...	160
139	88	38	7	1	1	1,510	......	80	......	....	....	.....	.....	.....	....	......
160	79	37	22	17	14	1,631	....	86	272	....	....	.....	.....	....	......	272
238	119	33	4	3	1	2,418	......	189	205	....	....	....	.....	1	12	218
533	390	141	38	32	6	6,195	11	44	686	....	....	.....	.....	......	....	686
365	262	107	20	7	2	3,813	....	260	182	...	....	.....	.....	......	......	182
2,923	2,054	652	135	75	26	34,652	11	1,337	1,760	...	1	1	1	1	24	1,788
1,935	1,186	191	27	21	6	19,738	34	826	1,900	11	....	36	8·4 ft. 1	6 ft. 4	3·9 ft. 10	1,962
596	287	28	2	1	...	6,438	.....	856	630	....	....	......	......	.....	......	630
257	121	14	2	....	....	3,908	......	348	315	....	....	......	....	......	......	315
2,788	1,594	233	31	22	6	30,084	34	2,030	2,845	11	...	36	1	4	10	2,907
31	14	2	1	....	....	424	...	50	1	....	....	.....	......	.....	....	1
82	15	6	6	3	1	1,172	.....	151	8	....	..	.....	.....	....	.....	8
87	32	7	1	....	...	1,041	.....	123	7	...	....	....	....	.....	......	7
200	61	15	8	3	1	2,637	.....	324	16	....	....	...	......	....	.....	16
22	9	5	....	....	....	398	......	32	51	....	....	.....	.....	......	......	51
86	34	8	1	1	....	1,445	......	225	19	....	....	.....	....	......	......	19
23	16	4	....	....	...	267	......	22	66	....	....	.....	.....	......	......	66
3	1	...	....	...	..	45	......	4	13	....	....	.....	.....	......	....	13
134	60	17	1	1	...	2,155	......	—	149	....	....	.....	.....	.....	......	149
59	17	2	....	....	....	641	......	83	8	....	....	.....	.....	1	......	9
47	29	11	2	2	....	2,514	......	2— — 3 3	29	....	....	....	......	...	....	29
47	24	13	5	6	1	496	....	1	11	....	....	....	.....	......	......	11

APPENDIX

RETURN showing the Number of Dominion Weights and Lineal Mesures during the Fiscal Year

Division.	Dominion											
	Avoir											
	60 lbs.	50 lbs.	30 lbs.	20 lbs.	10 lbs.	5 lbs.	3 lbs.	2 lbs.	1 lb.	8 ozs.	4 ozs.	2 ozs.
Ontario.												
Belleville	....	....	....	....	4	61	163	402	404	309	292	249
Hamilton	....	1	....	....	....	459	2,003	3,454	2,914	1,326	1,134	1,098
Kingston	....	6	....	5	7	78	172	380	378	311	267	247
London	....	....	....	....	...	19	105	319	293	185	162	153
Orillia	....	....	....	....	....	26	115	297	278	208	195	183
Ottawa	....	4	....	1	4	82	171	427	417	330	309	275
Toronto	....	....	....	....	21	172	694	1,072	1,061	787	639	609
Windsor	....	....	....	....	....	58	252	741	678	478	435	408
	...	11	....	6	36	955	3,675	7,092	6,423	3,934	3,433	3,222
Quebec.												
Montreal	2	48	4	8	55	1,046	1,710	3,023	3,023	2,632	2,511	2,310
Quebec	....	50	29	68	155	388	441	977	952	913	847	704
Three Rivers	....	25	1	5	14	271	346	668	655	603	526	400
	2	123	34	81	224	1,705	2,497	4,668	4,630	4,148	3,884	3,414
New Brunswick.												
Fredericton	....	....	....	....	...	12	13	97	87	63	56	48
King's	....	20	2	4	6	50	65	303	224	156	124	105
St. John	....	....	...	...	...	44	10	265	194	162	132	107
	....	20	2	4	6	106	88	665	505	381	312	260
Nova Scotia.												
Cape Breton	....	....	...	...	2	20	39	111	92	39	32	27
Halifax	....	10	....	. ..	1	58	60	371	293	211	175	136
Pictou	....	2	1	....	...	3	16	60	60	28	28	26
Yarmouth	...	....	....	....	....	2	2	12	11	6	5	3
	....	12	1	....	3	83	117	554	456	284	240	192
Prince Edward Island.												
Charlottetown	....	....	....	....	....	12	29	180	132	79	67	64
Manitoba.												
Winnipeg	....	....	...	1	71	315	422	757	551	169	75	62
British Columbia.												
Victoria	....	....	....	....	....	6	28	87	81	72	62	64

C.

of each Denomination presented for Verification in each Inspection Division ended 30th June, 1891.

WEIGHTS. dupois.									LINEAL MEASURES.							
1 oz.	8 drs.	4 drs.	2 drs.	1 dr.	½ dr.	Total Number Presented.	Troy Weights Presented.	Irregular Weights Presented.	Yard.	½ Yard.	2 Feet.	5 Feet.	12 Feet.	100 Ft. Chains.	66 Ft. Chains.	Total Number Presented.
212	146	35	12	5	1	2,295	...	235	31	....	1	1	1	.....	.....	34
1,076	841	208	10	2	....	14,526	.....	284	224	...	....	.....	....	......	12	236
200	129	53	22	8	1	2,264	....	159	160	....	....	.....	....	....	...	160
139	88	38	7	1	1	1,510	......	80	......	....	....	.....	.....	.....	....	......
160	79	37	22	17	14	1,631	....	86	272	....	....	.....	.....	....	......	272
238	119	33	4	3	1	2,418	.....	189	205	....	....	....	.....	1	12	218
533	390	141	38	32	6	6,195	11	44	686	....	....	.....	.....	......	....	686
365	262	107	20	7	2	3,813	....	260	182	...	....	....	.....	......	......	182
2,923	2,054	652	135	75	26	34,652	11	1,337	1,760	...	1	1	1	1	24	1,788
													8·4 ft.	6 ft.	3·9 ft.	
1,935	1,186	191	27	21	6	19,738	34	826	1,900	11	....	36	1	4	10	1,962
596	287	28	2	1	...	6,438	.....	856	630	....	....	......	.....	.....	......	630
257	121	14	2	....	....	3,908	.....	348	315	....	....	......	....	......	......	315
2,788	1,594	233	31	22	6	30,084	34	2,030	2,845	11	...	36	1	4	10	2,907
31	14	2	1	....	....	424	...	50	1	....	....	.....	......	.....	.....	1
82	15	6	6	3	1	1,172	.....	151	8	....	..	.....	.....	....	.....	8
87	32	7	1	....	...	1,041	.....	123	7	...	....	...	....	.....	.....	7
200	61	15	8	3	1	2,637	.....	324	16	....	....	...	.....	....	.....	16
22	9	5	....	....	....	398	.....	32	51	...	....	.....	.....	......	.....	51
86	34	8	1	1	....	1,445	.....	225	19	....	....	....	....	......	.....	19
23	16	4	....	....	...	267	.....	22	66	....	....	.....	.....	......	.....	66
3	1	...	...	...	..	45	.....	4	13	....	....	.....	.....	......	....	13
134	60	17	1	1	...	2,155	.....	—	149	....	....	.....	.....	.....	.....	149
59	17	2	....	....	....	641	.....	[illegible]	8	....	....	.....	.....	1	.....	9
47	29	11	2	2	....	2,514	.....	[illegible]	29	....	....	....	.....	....	....	29
47	24	13	5	6	1	496	....	1	11	....	....	....	.....	......	......	11

APPENDIX

Return showing the Number of Dominion Weights and Lineal Measures
during the Fiscal Year

Division.	Dominion											
	Avoir											
	60 lbs.	50 lbs.	30 lbs.	20 lbs.	10 lbs.	5 lbs.	3 lbs.	2 lbs.	1 lb.	8 ozs.	4 ozs.	2 ozs.
Ontario.												
Belleville	....	....	....	....	4	61	163	402	404	309	292	249
Hamilton	....	1	....	....	....	459	2,002	3,450	2,909	1,323	1,133	1,098
Kingston	....	4	....	4	6	71	153	355	356	299	255	238
London	....	....	....	....	....	19	105	319	293	185	162	153
Orillia	....	....	....	....	....	26	115	297	278	208	195	183
Ottawa	....	4	....	1	4	82	171	426	415	328	308	274
Toronto	....	....	....	....	21	172	694	1,072	1,061	787	639	609
Windsor	....	....	....	....	....	58	252	738	676	475	431	404
	....	9	....	5	35	948	3,655	7,059	6,392	3,914	3,415	3,208
Quebec.												
Montreal	2	48	4	8	55	1,046	1,710	3,022	3,023	2,632	2,510	2,310
Quebec	....	50	29	68	155	388	441	977	952	913	847	704
Three Rivers	....	25	1	5	14	271	346	668	655	603	526	400
	2	123	34	81	224	1,705	2,497	4,667	4,630	4,148	3,883	3,414
New Brunswick.												
Fredericton	....	....	....	....	....	12	13	97	87	63	56	48
King's	....	20	2	4	6	50	65	303	224	156	124	105
St. John	....	....	....	....	....	44	10	265	194	162	132	107
	....	20	2	4	6	106	88	665	505	381	312	260
Nova Scotia.												
Cape Breton	....	....	....	....	2	20	39	111	92	39	32	27
Halifax	....	10	....	....	1	58	60	371	293	211	175	136
Pictou	....	2	1	....	....	3	16	60	60	28	28	26
Yarmouth	....	....	....	....	....	2	2	12	11	6	5	3
	....	12	1	....	3	83	117	554	456	284	240	192
Prince Edward Island.												
Charlottetown	....	....	....	....	....	12	29	180	132	79	67	64
Manitoba.												
Winnipeg	....	....	....	1	71	311	419	741	540	163	72	60
British Columbia.												
Victoria	....	....	....	....	....	6	28	87	81	72	62	64

C—*Contiuued.*

of each Denomination, Inspected and Verified in each Inspection Division ended 30th June, 1891.

WEIGHTS.							Troy Weights.	Miscellaneous Weights.	LINEAL MEASURES.							
dupois.																
1 oz.	8 drs.	4 drs.	2 drs.	1 dr.	½ dr.	Total Number Verified.			Yard.	½ Yard.	2 Feet.	5 Feet.	12 Feet.	100 Ft. Chains.	66 Ft. Chains.	Total Number Verified.
212	146	35	12	5	1	2,295	.....	235	31	....	1	1	1	......	.....	34
1,076	841	208	10	2	....	14,512	......	280	223	....	....	......	......	.....	12	235
196	127	53	22	8	1	2,148	.....	127	150	....	....	...	..	.....	.....	150
139	88	38	7	1	1	1,510	......	80	......	....	....	......	...	.....	.....	..
160	79	37	22	17	14	1,631	......	86	255	....	....	.....	....	......	.....	255
238	119	33	4	3	1	2,411	......	187	205	....	....	......	.....	1	12	218
533	390	141	38	32	6	6,195	11	44	686	....	....	......	......	....	.....	686
363	261	107	20	7	2	3,794	.....	258	182	...	....	.....	...	......	.....	182
2,917	2,051	652	135	75	26	34,496	11	1,297	1,732	....	1	1	1	1	24	1,760
1,935	1,186	191	27	21	6	19,736	34	817	1,881	11	3f.9i 10	36	8ft 4in 1	6 ft. 4	.....	1,943
595	287	28	2	1	....	6,437	.. ..	854	622	....	....	.....	.....	......	.....	622
257	121	14	2	....	...	3,908	...	345	304	....	...	.....	......	.....	....	304
2,787	1,594	233	31	22	6	30,081	34	2,016	2,807	11	10	36	1	4	.....	2,869
31	14	2	1	....	....	424	....	50	1	....	....	.....	......	....	.....	1
82	15	6	6	3	1	1,172	.....	151	8	....	....	...	......	.....	.....	8
87	32	7	1	....	....	1,041	.....	123	7	..	....	......	.....	.....	...	7
200	61	15	8	3	1	2,637	....	324	16	....	...	.....	......	..	......	16
22	9	5	...	.	....	398	......	32	51	....	....	....	......	...	......	51
86	34	8	1	1	....	1,445	....	225	19	..	....	......	......	......	......	19
23	16	4	....	....	....	267	.....	22	65	...	....	......	.....	.....	....	65
3	1	...	....	....	....	45	.. ..	4	13	....	....	.....	....	......	....	13
134	60	17	1	1	...	2,155	.....	283	148	....	....	......	.....	......	......	148
59	17	2	....	....	....	641	......	33	8	....	....	.....	.....	100f.c 1	....	9
47	28	10	2	2	....	2,467	......	1	29	.. .	....	.. .	.....	....	.....	29
47	24	13	5	6	1	496	......	1	11	....	....	....	......	......	.. .	11

APPENDIX

RETURN showing the Number of Dominion Weights and Lineal Measures during the Fiscal Year

DIVISION.	DOMINION											
	Avoir											
	60 lbs.	50 lbs.	30 lbs.	20 lbs.	10 lbs.	5 lbs.	3 lbs.	2 lbs.	1 lb.	8 ozs.	4 ozs.	2 ozs.
Ontario.												
Hamilton	..	....	....	...	....	....	1	4	5	3	1	.....
Kingston	....	2	....	1	1	7	19	25	22	12	12	9
Orillia	....	....	....	....	....	....	.....	.....	.....	.....	....	...
Ottawa	...	....	....	....	....	.....	..	1	2	2	1	1
Windsor	....	....	....	..	....	.....	....	3	2	3	4	4
	...	2	....	1	1	7	20	33	31	20	18	14
Quebec.												
Montreal	....	....	....	....	....	....	....	1	....	.....	1	.....
Quebec	....	....	....	....	...	.....	....	.....	.....	....	.....	.....
Three Rivers	....	....	....	....	....	....	.....	.....	.....	....	....	.. .
	....	...	...	....	...	.....	....	1	...	....	1	....
Nova Scotia.												
Pictou	...	....	....	...	....	....	....	.....	.....	.....	.....	.....
Manitoba.												
Winnipeg	..	....	...	...	....	4	3	16	11	6	3	2

C—*Concluded.*

of each Denomination rejected in each Inspection Division
ended 30th June, 1891.

WEIGHTS.									LINEAL MEASURES.							
dupois.																
1 oz.	8 drs.	4 drs.	2 drs.	1 dr.	½ dr.	Total Number Rejected.	Troy Weights.	Miscellaneous Weights.	Yard.	½ Yard.	2 Feet.	1 Foot.	½ Foot.	100 Feet chains.	66 Feet chains.	Total Number Rejected.
....	....	....	....	....	....	14	....	4	1	....	....	....	....	....	....	1
4	2	....	....	....	....	116	....	32	10	....	....	....	....	....	....	10
....	....	....	....	....	....	....	....	....	17	....	....	....	....	....	....	17
....	....	....	....	....	....	7	....	2	....	....	....	....	....	....	....	....
2	1	....	....	....	....	19	....	2	....	....	....	....	....	....	....	....
6	3	....	....	....	....	156	....	40	28	....	....	....	....	....	....	28
....	....	....	....	....	....	2	....	9	19	....	....	....	....	....	....	19
1	....	....	....	....	....	1	....	2	8	....	....	....	....	....	....	8
....	....	....	....	....	....	....	....	3	11	....	....	....	....	....	....	11
1	....	....	....	....	....	3	....	14	38	....	....	....	....	....	....	38
....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1
....	1	1	....	....	....	47	....	....	....	....	....	....	....	....	....	....

APPENDIX

RETURN showing the Number of Dominion Measures of Capacity, Balances each Inspection Division, during

Division.	Measures of Capacity.										
	Dominion.										
	Bushel.	½ Bushel.	Peck.	Gallon.	½ Gallon.	Quart.	Pint.	½ Pint.	Gill.	½ Gill.	Total Number Presented.
Ontario.											
Belleville	16	10	24	97	220	673	467	26	4	....	1,537
Hamilton	18	174	132	678	1,154	1,978	936	296	7	..	5,373
Kingston	24	1,242	791	1,434	1,118	1,583	1,388	108	4	...	7,692
London	2	1,195	1,014	1,283	1,289	2,692	3,495	1,061	.....	....	12,031
Orillia	...	15	4	176	252	381	343	64	27	24	1,286
Ottawa	....	50	84	269	379	670	562	182	47	....	2,243
Toronto	9	24	234	1,036	1,797	3,077	4,023	751	4	2	10,957
Windsor	2	103	85	315	378	557	416	47	......	....	1,903
	71	2,813	2,368	5,288	6,587	11,611	11,630	2,535	93	26	43,022
Quebec.											
Montreal	1	669	1,060	2,798	2,886	4,489	4,785	2,488	792	5	19,973
Quebec	2	100	104	464	726	878	865	491	185	2	3,817
Three Rivers	1	261	138	453	847	990	801	601	187	83	4,362
	4	1,030	1,302	3,715	4,459	6,357	6,451	3,580	1,164	90	28,152
New Brunswick.											
Fredericton	....	33	34	157	188	131	61	30	7	....	641
King's	6	1	....	232	450	317	186	33	5	...	1,230
St. John	....	309	206	695	730	784	766	409	215	....	4,114
	6	343	240	1,084	1,368	1,232	1,013	472	227	...	5,985
Nova Scotia.											
Cape Breton	....	9	4	45	141	144	84	46	7	...	480
Halifax	..	88	51	255	257	323	335	157	29	5	1,500
Pictou	1	35	31	109	221	237	108	19	7	....	768
Yarmouth	....	......	1	26	36	26	8	2	.....	...	99
	1	132	87	435	655	730	535	224	43	5	2,847
Prince Edward Island.											
Charlottetown	...	....	.....	9	26	103	102	19	....	..	259
Manitoba.											
Winnipeg	53	16	3	156	260	337	390	13	1	1	1,230
British Columbia.											
Victoria	...	......	2	42	5	32	34	14	....	..	129

D.

and Weighing Machines of each Denomination presented for Verification in the Fiscal Year ended 30th June, 1891.

Irregular Measures.	Balances.														Total Number Presented.
	With Equal Arms.				Steelyards, with Divided Arms.				Weigh-Bridges, or Platform Scales.						
	5 lbs. and under.	5 lbs. to 50 lbs.	50 lbs. to 100 lbs.	100 lbs. and upwards.	500 lbs. and under.	500 lbs. to 1,000 lbs.	1,000 lbs. to 2,000 lbs.	2,000 lbs. and upwards.	250 lbs. and under.	250 lbs. to 500 lbs.	500 lbs. to 2,000 lbs.	2,000 lbs. to 4,000 lbs.	4,000 lbs. to 6,000 lbs.	6,000 lbs. and upwards.	
......	87	296	1	......	84	2	3	....	363	69	330	85	24	51	1,395
1	1,288	1,753	....	......	1,349	46	2	....	2,747	290	1,378	437	86	134	9,511
.....	121	265	.....	....	35	12	.. .	....	415	167	367	57	24	67	1,530
.....	61	193	.....	......	70	1	....	1	321	39	469	61	23	54	1,293
.....	111	175	. . .	......	78	....	....	2	308	23	342	66	1	75	1,181
. . .	59	301	.... .	1	20	....	....	...	432	137	316	51	36	24	1,377
2	288	631	...	.... .	379	4	4	5	700	61	483	148	65	160	2,930
......	193	462	.... ..	.... ..	97	....	....	....	754	88	567	154	18	106	2,439
3	2,208	4,076	1	1	2,112	65	9	8	6,040	874	4,252	1,059	277	671	21,656
22	779	2,172	.....	4	763	8	...	21	1,568	720	1,289	141	151	129	7,767
......	178	756	20	38	53	1	....	1	103	208	175	13	5	6	1,557
......	43	540	21	2	27	....	....	....	184	199	228	1	10	7	1,262
22	1,000	3,468	41	44	843	9	....	22	1,855	1,127	1,692	155	166	142	10,586
.....	15	54	......	....	6	1	....	....	90	40	30	3	1	......	240
...	63	141	.....	14	38	....	...	....	238	100	70	7	. ..	7	678
8	39	152	....	... .	8	....	...	..	118	99	70	17	4	16	531
8	117	347	......	14	52	1	....	...	446	239	170	27	5	23	1,449
....	16	67	....	.. ..	4	....	....	1	89	31	20	3	4	11	246
424	31	203	1	3	11	3	....	1	150	83	99	10	1	7	1,027
....	21	73	1	5	10	...	....	....	155	79	27	1	1	5	378
2	2	7	.....	...	19	....	....	....	23	4	4	1	.....	....	62
426	70	350	2	8	44	3	....	2	417	197	150	15	6	23	1,713
..	29	84	1	......	2	....	....	1	88	47	114	8	15	13	402
......	20	77	. ...	......	30	. ..	....	...	150	7	177	47	29	26	563
.... .	33	39	....	......	29	4	....	...	191	26	114	13	3	8	460

APPENDIX

Return showing the Number of Dominion Measures of Capacity, Balances each Inspection Division during the

Division.	Measures of Capacity.										
	Dominion.										
	Bushel.	½ Bushel.	Peck.	Gallon.	½ Gallon.	Quart.	Pint.	½ Pint.	Gill.	½ Gill.	Total No. Verified.
Ontario.											
Belleville	16	10	24	97	220	673	467	26	4	..	1,537
Hamilton	17	172	131	678	1,151	1,976	934	295	7	....	5,361
Kingston	20	1,185	728	1,336	1,054	1,505	1,364	106	4	...	7,302
London	2	1,195	1,014	1,283	1,289	2,692	3,494	1,061	......	..	12,030
Orillia	....	15	4	176	252	381	343	64	27	24	1,286
Ottawa	....	50	84	269	379	668	561	181	47	....	2,239
Toronto	9	24	234	1,036	1,797	3,077	4,023	751	4	2	10,957
Windsor	2	103	85	315	378	557	416	47	....	...	1,903
	66	2,754	2,304	5,190	6,520	11,529	11,602	2,531	93	26	42,615
Quebec.											
Montreal	1	661	1,056	2,796	2,886	4,489	4,785	2,488	792	5	19,959
Quebec	2	100	104	464	726	877	865	491	185	2	3,816
Three Rivers	1	252	135	449	841	981	791	590	180	82	4,302
	4	1,013	1,295	3,709	4,453	6,347	6,441	3,569	1,157	89	28,077
New Brunswick.											
Fredericton	....	33	34	157	188	131	61	30	7	....	641
Kings	6	1	......	231	449	316	186	33	5	....	1,227
St. John	....	309	206	695	730	784	766	409	215	..	4,114
	6	343	240	1,083	1,367	1,231	1,013	472	227	....	5,982
Nova Scotia.											
Cape Breton	...	9	4	45	141	144	84	46	7	....	480
Halifax	...	88	49	255	257	323	335	157	29	5	1,498
Pictou	1	34	31	109	215	235	108	19	7	...	759
Yarmouth	....	....	1	26	36	26	8	2	....	....	99
	1	131	85	435	649	728	535	224	43	5	2,836
Prince Edward Island.											
Charlottetown	....	......	......	9	26	103	102	19	......	...	259
Manitoba.											
Winnipeg	53	16	3	153	254	331	388	13	1	1	1,213
British Columbia.											
Victoria	....	....	2	42	5	32	34	14	....	....	129

D—*Continued.*

and Weighing Machines of each Denomination Inspected and Verified in Fiscal Year ended 30th June, 1891.

IRREGULAR MEASURES.	BALANCES.														
	With Equal Arms.				Steelyards, with Divided Arms.				Weigh-bridges, or Platform Scales.						Total Number Verified.
Verified.	5 lbs. and under.	5 lbs. to 50 lbs.	50 lbs. to 100 lbs.	100 lbs. and upwards.	500 lbs. and under.	500 lbs. to 1,000 lbs.	1,000 lbs. to 2,000 lbs.	2,000 lbs. and upwards.	250 lbs. and under.	250 lbs. to 500 lbs.	500 lbs. to 2,000 lbs.	2,000 lbs. to 4,000 lbs.	4,000 lbs. to 6,000 lbs.	6,000 lbs. and upwards.	
.....	87	296	1	.....	84	2	3	...	363	69	330	85	24	51	1,395
1	1,285	1,743	.....	.....	1,346	46	2	....	2,720	285	1,351	433	82	124	9,418
......	92	240	.....	.....	19	6	..	....	382	140	328	44	20	57	1,328
......	60	192	.....	.....	68	1	...	1	309	38	460	61	22	53	1,265
.....	111	175	.....	......	77	....	....	2	306	23	342	66	1	73	1,176
......	59	301	......	1	20	....	....	....	432	137	315	51	36	23	1,375
2	288	631	.....	...	379	4	4	5	700	61	483	148	65	160	2,930
......	192	462	.....	.....	96	....	....	....	747	85	549	154	18	102	2,405
3	2,174	4,040	1	1	2,089	59	9	8	5,959	838	4,158	1,042	268	643	21,292
22	779	2,171	.	4	761	8	...	21	1,562	701	1,262	141	135	120	7,687
......	178	755	20	38	50	1	....	1	103	206	175	13	5	6	1,551
....	41	513	21	2	24	....	....	....	176	194	224	1	10	7	1,213
22	998	3,439	41	44	835	9	....	22	1,841	1,101	1,661	155	150	133	10,451
.....	15	54	...	....	6	1	....	....	90	40	30	3	1	...	240
......	63	141	....	14	38	....	...	....	238	98	68	7	.....	7	674
8	39	152	.....	....	8	....	...	....	118	99	70	17	4	16	531
8	117	347	.....	14	52	1	....	....	446	237	168	27	5	23	1,445
.....	16	66	....	....	4	...	..	1	87	31	20	3	4	10	242
424	31	203	1	3	11	3	....	1	150	83	99	10	1	7	1,027
.....	21	72	1	4	10	....	....	....	152	77	27	1	1	5	371
2	2	6	...	......	19	..	...	....	23	4	4	1	.....	.....	61
426	70	347	2	7	44	3	....	2	412	195	150	15	6	22	1,701
.....	29	84	1	.	2	....	....	1	88	47	114	8	15	13	402
..	20	75	....	....	28	....	....	....	146	7	170	47	28	23	544
.....	33	39	....	......	29	4	....	....	191	26	114	13	3	8	460

APPENDIX

Return showing the Number of Dominion Measures of Capacity, Balances each Inspection Division, during the

Division.	Measures of Capacity.										
	Dominion.										
	Bushel.	½ Bushel.	Peck.	Gallon.	½ Gallon.	Quart.	Pint.	½ Pint.	Gill.	½ Gill.	Total Number Rejected.
Ontario.											
Hamilton	1	2	1	....	3	2	2	1	...	...	12
Kingston	4	57	63	98	64	78	24	2	.....	...	390
London	..	.....	..	..	...	.....	1	.....	.....	...	1
Orillia	...	.....	.....	.....	.....	.....	.....	.....	.....	...	....
Ottawa	..	.....	.....	.....	....	2	1	1	....	...	4
Windsor	...	.....	.....	.....	.....	.....	....	.....	.....	...	....
	5	59	64	98	67	82	28	4	...	....	407
Quebec.											
Montreal	....	8	4	2	....	..	....	....	..	....	14
Quebec	....	.....	.....	.....	.....	1	....	.....	.....	....	1
Three Rivers	...	9	3	4	6	9	10	11	7	1	60
	....	17	7	6	6	10	10	11	7	1	75
New Brunswick.											
King's	...	...	......	1	1	1	.....	.....	......	....	3
Nova Scotia.											
Cape Breton	....	.....	.....	.....	.....	..	.....	.....	.....	....	....
Halifax	.	.....	2	.....	.....	.....	.....	.....	.....	....	2
Pictou	....	1	.....	.....	6	2	.....	.....	.....	....	9
Yarmouth	....	.....	.....	.....	.....	.....	.....	.....	.....	....	....
	....	1	2	.....	6	2	.....	.....	......	..	11
Manitoba.											
Winnipeg	....	.....	...	3	6	6	2	...	....	....	17

D—*Concluded.*

and Weighing Machines of each Denomination Inspected and Rejected in Fiscal Year ended 30th June, 1891.

Irregular Measures.	Balances.														Total Number Rejected.
	With Equal Arms.				Steelyards, with Divided Arms.				Weigh-Bridges, or Platform Scales.						
	5 lbs. and under.	5 lbs. to 50 lbs.	50 lbs. to 100 lbs.	100 lbs. and upwards.	500 lbs. and under.	500 lbs. to 1,000 lbs.	1,000 lbs. to 2,000 lbs.	2,000 lbs. and upwards.	250 lbs. and under.	250 lbs. to 500 lbs.	500 lbs. to 2,000 lbs.	2,000 lbs. to 4,000 lbs.	4,000 lbs. to 6,000 lbs.	6,000 lbs. and upwards.	
......	3	10	......	....	3	....	....	....	27	5	27	4	4	10	93
......	29	25	......	......	16	6	....	....	33	27	39	13	4	10	202
.	1	1	......	......	2	....	....	....	12	1	9	....	1	1	28
......	.....	......	......	......	1	....	....	....	2	.....	.....	. .	.....	2	5
....	....	.....	....	......	......	....	....	....	......	....	1	...	...	1	2
......	1	.....	......	.....	1	...	....	....	7	3	18	....	.....	4	34
....	34	36	....	......	23	6	....	....	81	36	94	17	9	28	364
......	......	1	......	.....	2	....	....	...	6	19	27	....	16	9	80
......	. .	1	....	....	3	....	....	....	..	2	..	.....	..	..	6
......	2	27	...	.....	3	....	....	....	8	5	4	.....	.....	..	49
......	2	29	.....	...	8	....	....	...	14	26	31	.....	16	9	135
......	......	..	......	......	......	....	....	....	......	2	2	.....	....	....	4
......	.....	1	.....	......	.....	....	....	....	2	.....	.. ..	.....	.....	1	4
......	......	......	......	......	......	....	....	....	......	......	......	......	......	......	......
...	......	1	....	1	......	....	...	....	3	2	... ..	....	......	......	7
......	......	1	......	......	.....	....	....	....	......	......	......	.....	......	.....	1
... ..	......	3	.....	1	.....	....	....	....	5	2	......	......	...	1	12
......	......	2	......	......	2	....	....	....	4	......	7	......	1	3	19

APPENDIX E.

STATEMENT of Gas Inspection Expenditure and Receipts for the Year ended 30th June, 1891.

Districts.	Inspectors.	Expenditure.				Total Expenditure.	Total Receipts.
		Salaries.	Rent.	Travelling Expenses.	Sundries.		
Ontario.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Barrie	M. Shanacy	97 81	...	49 65	122 91	270 37	112 00
Belleville	W. Johnson	250 00	50 00	...	39 10	339 10	71 00
Berlin	K. Lynes	80 18	...	28 70	218 36	327 24	47 75
Brockville	W. W. Giffin	100 00	...	...	7 00	107 00	119 75
Cobourg	J. W. Bickle	100 00	60 00	43 80	407 43	611 23	113 00
Cornwall	M. M. Mulhern	100 00	...	...	52 75	152 75	24 00
Guelph	S. Broadfoot	80 18	...	...	6 30	86 48	30 00
Hamilton	D. McPhee W. A. Dennis	1,300 00	36 00	172 30	196 96	1,705 26	506 00
Kingston	W. Burrows	400 00	45 00	49 90	96 50	591 40	73 25
Listowel	A. St. G. Hawkins.	100 00	60 00	...	2 85	162 85	39 75
London	J. Williams	1,000 00	110 00	233 45	95 60	1,439 05	665 75
Napanee	Geo. M. Elliott	100 00	...	...	173 76	273 76	49 00
Ottawa	H. G. Roche	600 00	200 00	...	119 50	919 50	227 00
Owen Sound	W. J. Graham	200 00	62 50	...	46 63	309 13	43 75
Peterborough	T. Cahill	200 00	50 00	23 30	19 65	292 95	48 00
Stratford	Geo. Rennie	97 81	...	21 95	9 72	129 48	80 00
Sarnia	W. H. Hicks	...	10 00	61 45	122 10	193 55	100 75
Toronto	J. K. Johnstone	1,200 00	...	23 50	58 41	1,281 91	2,303 40
		6,005 98	683 50	708 00	1,795 53	9,193 01	4,654 15
Quebec.							
Montreal	Wm. Hartt A. Aubin	2,000 00	120 00	15 00	77 74	2,212 74	2,104 75
Quebec	N. Levasseur A. Moreau	1,205 36	...	...	157 91	1,363 27	285 00
Sherbrooke	H. J. Pennoyer	100 00	...	...	7 35	107 35	31 00
Sorel	P. C. A. Bruneau	33 32	...	...	...	33 32	...
Three Rivers	N. Marchand	200 00	...	...	...	200 00	...
		3,538 68	120 00	15 00	243 00	3,916 68	2,420 75
New Brunswick.							
Fredericton	S. A. Purdie	200 00	...	...	...	200 00	49 25
Moncton	R. A. Lawlor	300 00	...	147 11	96 83	543 94	18 00
St. John	A. Rowan	1,000 00	...	91 65	75 00	1,166 65	201 75
		1,500 00	...	238 76	171 83	1,910 59	269 00
Nova Scotia.							
Halifax	A. Miller H. D. Munro	1,300 00	300 00	439 40	123 92	2,163 32	417 25
P. E. Island.							
Charlottetown	Jos. Knight	200 00	...	...	26 50	226 50	51 50
Manitoba.							
Winnipeg	R. T. Huggard	200 00	108 00	...	22 40	330 40	55 25
British Columbia.							
Victoria	R. Jones	200 00	210 00	...	1 38	411 38	80 00

APPENDIX E—*Concluded.*

STATEMENT of Gas Inspection Expenditure and Receipts for the Year ended 30th June—*Concluded.*

RECAPITULATION.

—	Expenditure.				Total Expenditure	Total Receipts.
	Salaries.	Rent.	Travelling Expenses.	Sundries.		
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Ontario	6,005 98	683 50	708 00	1,795 53	9,193 01	4,654 15
Quebec	3,538 68	120 00	15 00	243 00	3,916 68	2,420 75
New Brunswick	1,500 00		238 76	171 83	1,910 59	269 00
Nova Scotia	1,300 00	300 00	439 40	123 92	2,163 32	417 25
Prince Edward Island	200 00			26 50	226 50	51 50
Manitoba	200 00	108 00		22 40	330 40	55 25
British Columbia	200 00	210 00		1 38	411 38	80 00
General Expenses			113 01	1.247 93	1,360 94	
Queen's Printer				267 01	267 01	
Stationery				153 88	153 88	
	12,944 66	1,421 50	1,514 17	4,053 38	19,933 71	7,947 90

APPENDIX E.

STATEMENT of Gas Inspection Expenditure and Receipts for the Year ended 30th June, 1891.

Districts.	Inspectors.	Expenditure.				Total Expenditure.	Total Receipts.
		Salaries.	Rent.	Travelling Expenses.	Sundries.		
Ontario.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Barrie	M. Shanacy	97 81	....	49 65	122 91	270 37	112 00
Belleville	W. Johnson	250 00	50 00	....	39 10	339 10	71 00
Berlin	K. Lynes	80 18	....	28 70	218 36	327 24	47 75
Brockville	W. W. Giffin	100 00	....	....	7 00	107 00	119 75
Cobourg	J. W. Bickle	100 00	60 00	43 80	407 43	611 23	113 00
Cornwall	M. M. Mulhern	100 00	....	....	52 75	152 75	24 00
Guelph	S. Broadfoot	80 18	....	....	6 30	86 48	30 00
Hamilton	D. McPhee W. A. Dennis	1,300 00	36 00	172 30	196 96	1,705 26	506 00
Kingston	W. Burrows	400 00	45 00	49 90	96 50	591 40	73 25
Listowel	A. St. G. Hawkins	100 00	60 00	....	2 85	162 85	39 75
London	J. Williams	1,000 00	110 00	233 45	95 60	1,439 05	665 75
Napanee	Geo. M. Elliott	100 00	....	....	173 76	273 76	49 00
Ottawa	H. G. Roche	600 00	200 00	....	119 50	919 50	227 00
Owen Sound	W. J. Graham	200 00	62 50	....	46 63	309 13	43 75
Peterborough	T. Cahill	200 00	50 00	23 30	19 65	292 95	48 00
Stratford	Geo. Rennie	97 81	....	21 95	9 72	129 48	80 00
Sarnia	W. H. Hicks	....	10 00	61 45	122 10	193 55	100 75
Toronto	J. K. Johnstone	1,200 00	....	23 50	58 41	1,281 91	2,303 40
		6,005 98	683 50	708 00	1,795 53	9,193 01	4,654 15
Quebec.							
Montreal	Wm. Hartt A. Aubin	2,000 00	120 00	15 00	77 74	2,212 74	2,104 75
Quebec	N. Levasseur A. Moreau	1,205 36	....	....	157 91	1,363 27	285 00
Sherbrooke	H. J. Pennoyer	100 00	....	....	7 35	107 35	31 00
Sorel	P. C. A. Bruneau	33 32	....	....	....	33 32	....
Three Rivers	N. Marchand	200 00	....	....	....	200 00	....
		3,538 68	120 00	15 00	243 00	3,916 68	2,420 75
New Brunswick.							
Fredericton	S. A. Purdie	200 00	....	....	....	200 00	49 25
Moncton	R. A. Lawlor	300 00	....	147 11	96 83	543 94	18 00
St. John	A. Rowan	1,000 00	....	91 65	75 00	1,166 65	201 75
		1,500 00	....	238 76	171 83	1,910 59	269 00
Nova Scotia.							
Halifax	A. Miller H. D. Munro	1,300 00	300 00	439 40	123 92	2,163 32	417 25
P. E. Island.							
Charlottetown	Jos. Knight	200 00	....	....	26 50	226 50	51 50
Manitoba.							
Winnipeg	R. T. Huggard	200 00	108 00	....	22 40	330 40	55 25
British Columbia.							
Victoria	R. Jones	200 00	210 00	....	1 38	411 38	80 00

APPENDIX E—*Concluded.*

STATEMENT of Gas Inspection Expenditure and Receipts for the Year ended 30th June—*Concluded.*

RECAPITULATION.

——	Expenditure.				Total Expenditure	Total Receipts.
	Salaries.	Rent.	Travelling Expenses.	Sundries.		
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Ontario	6,005 98	683 50	708 00	1,795 53	9,193 01	4,654 15
Quebec	3,538 68	120 00	15 00	243 00	3,916 68	2,420 75
New Brunswick	1,500 00	....	238 76	171 83	1,910 59	269 00
Nova Scotia	1,300 00	300 00	439 40	123 92	2,163 32	417 25
Prince Edward Island	200 00	....	....	26 50	226 50	51 50
Manitoba	200 00	108 00	....	22 40	330 40	55 25
British Columbia	200 00	210 00	....	1 38	411 38	80 00
General Expenses	....	....	113 01	1.247 93	1,360 94	....
Queen's Printer	....	....	....	267 01	267 01	....
Stationery	....	....	....	153 88	153 88	....
	12,944 66	1,421 50	1,514 17	4,053 38	19,933 71	7,947 90

APPENDIX F.

STATEMENT of Gas Meters presented for Verification, Verified after First Rejection, and Rejected, during the year ended 30th June, 1891.

Inspection Office.	Presented for Verification.	Kind.		Verified as coming within the Error Tolerated by Law.			Verified after First Rejection.			Rejected.			Total Verified and Rejected.	
		Wet.	Dry.	Correct.	Fast.	Slow.	Correct.	Fast.	Slow.	Unsound.	Fast.	Slow.	Verified.	Rejected.
Belleville	78	....	78	10	2	65	...	....	...	1	....	....	77	1
Brantford	147	....	147	22	39	85	....	....	...	....	1	....	146	1
Brockville	93	....	93	55	20	18	....	....	....	....	....	....	93	...
Chatham	112	....	112	32	42	36	...	1	1	1	1	....	110	2
Cobourg	33	....	33	3	5	25	....	....	....	....	....	....	33	....
Barrie	186	....	186	18	79	75	1	15	16	2	10	2	172	14
Dundas	9	....	9	2	1	6	....	....	....	....	....	....	9	..
Galt	22	....	22	.....	4	17	....	....	....	....	1	..	21	1
Guelph	31	....	31	2	15	13	....	....	.	....	....	1	30	1
Hamilton	352	....	352	107	63	182	....	....	....	....	....	....	352	...
Ingersoll	41	....	41	7	5	10	4	4	3	12	4	3	22	19
Berlin	61	....	61	2	38	21	....	....	....	....	....	....	61	...
Kingston	165	....	165	8	33	124	....	....	....	....	....	....	165	....
Listowell	27	...	27	13	6	3	....	....	....	...	5	...	22	5
Lindsay	8	....	8	.....	2	5	....	....	....	....	....	1	7	1
London	460	....	460	132	138	186	....	....	1	1	2	1	456	4
Ottawa	186	....	186	13	87	84	....	....	....	....	2	..	184	2
Napanee	23	....	23	8	2	10	....	....	....	1	....	2	20	3
Owen Sound	78	....	78	61	5	12	....	....	....	....	....	....	78	..
Peterborough	Nil.	....	...	......	......	....	....	....	....	....	....	....	Nil.	....
Port Hope	78	....	78	5	38	35	....	....	....	....	....	....	73	....
Sarnia	89	....	89	18	29	42	....	....	....	....	....	....	39	....
Stratford	68	....	68	22	34	11	....	....	....	....	1	....	67	1
St. Catharines	139	...	139	21	13	105	....	....	....	....	....	....	139	....
St. Thomas	92	....	92	20	16	52	1	....	2	1	1	2	88	4
Toronto	3,141	....	3,141	509	499	2,077	....	....	....	11	34	11	3,085	56
Windsor	71	....	71	16	35	16	....	....	....	2	2	....	67	4
Woodstock	26	....	26	5	19	1	....	....	....	....	1	....	25	1
Montreal	2,796	...	2,796	363	557	1,841	....	....	....	3	20	12	2,761	35
Quebec	235	80	155	42	151	41	....	....	....	....	....	1	234	1
Sherbrooke	17	....	17	4	9	1	....	....	....	....	3	....	14	3
Three Rivers	Nil.	....	....	......	...	....	....	....	....	....	....	....	Nil.	...
Fredericton	44	....	44	4	17	19	....	....	....	1	1	2	40	4
St. John, N.B.	181	....	181	65	26	87	....	....	....	....	3	....	178	3
Halifax	191	155	36	96	34	57	....	....	....	....	3	1	187	4
Pictou	15	....	15	9	3	3	....	....	....	....	....	....	15	....
Yarmouth	187	....	187	58	66	51	1	....	....	2	6	4	175	12
Charlottetown	47	....	47	6	5	23	....	....	....	6	2	5	34	13
Winnipeg	62	...	62	46	8	8	....	....	....	....	....	....	62	....
Victoria, B.C.	88	....	88	21	37	30	....	....	....	....	....	....	88	....
	9,679	235	9,444	1,825	2,182	5,477	7	20	23	44	103	48	9,484	195

INSPECTION OF GAS AND GAS METERS

APPEN

RETURN of the Illuminating Power and Purity of Gas

Inspection Office.	Illuminating Power.						Sulphur per		
	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	No. of Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.			Grains.	Grains.	Grains.
Belleville—									
July	Nil.	....	....	....	....	....	....	....	....
August	Nil.	....	....	....	....	....	....	....	....
September	Nil.	....	....	....	....	....	....	....	....
October	26·02	20·88	23·28	16	0	3	....	....	....
November	23·67	21·95	22·82	16	0	3	....	....	....
December	19·73	17·41	18·57	16	0	2	....	....	....
January	23·15	14·37	17·56	16	0	3	....	....	....
February	22·70	18 06	21·46	16	0	5	....	....	....
March	21·92	16·21	18·39	16	0	7	....	....	....
April	23·73	19·57	22·09	16	0	8	....	....	....
May	22·98	20·80	22·49	16	0	5	....	....	....
June	22·54	20·97	21·74	16	0	6	....	....	....
					0	42			
Brantford—									
July	....	....	17·96	16	0	1	....	....	....
August	....	....	19·40	16	0	1	....	....	....
September	....	....	18·29	16	0	1	....	....	....
October	....	....	19·28	16	0	1	....	....	....
November	....	....	19·57	16	0	1	....	....	....
December	....	....	19·66	16	0	1	....	....	....
January	....	....	18·80	16	0	1	....	....	....
February	....	....	19·23	16	0	1	....	....	....
March	....	....	19·57	16	0	1	....	....	....
April	....	....	19·06	16	0	1	....	....	....
May	....	....	19·34	16	0	1	....	....	....
June	....	....	19·34	16	0	1	....	....	....
					0	12			
Brockville—									
July	....	....	....	....	....	....	....	....	....
August	....	....	....	....	....	....	....	....	....
September	....	....	....	....	....	....	....	....	....
October	....	....	20·82	16	0	1	....	....	....
November	....	....	....	....	....	....	....	....	....
December	....	....	....	....	....	....	....	....	....
January	....	....	21·54	16	0	1	....	....	....
February	....	....	....	....	....	....	....	....	....
March	....	....	22·52	16	0	1	....	....	....
April	....	....	22·22	16	0	1	....	....	....
May	....	....	20·50	16	0	1	....	....	....
June	....	....	21·82	16	0	1	....	....	....
					0	6			

DIX G.

Inspected during the Year ended 30th June, 1891.

100 Cubic Feet.			Ammonia per 100 Cubic Feet.						Sulphuretted Hydrogen.			
Standard.	Times in excess of Allowance.	No. of Tests.	Highest	Lowest.	Average	Standard.	Times in excess of Allowance.	No. of Tests.	No. of times absent.	No. of times present.	No. of Tests.	Remarks.
Grains.			Grains.	Grains.	Grains.	Grains.						
....	....	....	....	....	....	....	....	....	....	....	....	No tests made.
....	....	....	....	....	....	....	....	....	....	....	....	do
....	....	....	....	....	....	....	....	....	....	....	....	do
....	....	....	....	....	....	....	....	....	3	0	3	
....	....	....	....	....	....	....	....	....	2	1	3	Fine was imposed, $10.
....	....	....	....	....	....	....	....	....	1	1	2	
....	....	....	....	....	....	....	....	....	3	0	3	
....	....	....	....	....	....	....	....	....	5	0	5	
....	....	....	....	....	....	....	....	....	7	0	7	
....	....	....	....	....	....	....	....	....	7	1	8	
....	....	....	....	....	....	....	....	....	5	0	5	
....	....	....	....	....	....	....	....	....	6	0	6	
									39	3	42	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
									12	0	12	
....	....	....	....	....	....	....	....	....	....	....	....	
....	....	....	....	....	....	....	....	....	....	....	....	
....	....	....	....	....	....	....	....	....	....	....	....	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	....	....	....	
....	....	....	....	....	....	....	....	....	....	....	....	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	....	....	....	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
									6	0	6	

APPENDIX

RETURN of the Illuminating Power and Purity of Gas

Inspection Office.	Illuminating Power.						Sulphur per		
	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	No. of Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.			Grains.	Grains.	Grains.
Chatham:—									
July	...	...	18·40	16	0	1	...	...	...
August	...	...	16·50	16	0	1	...	...	...
September	...	...	16·67	16	0	1	...	...	...
October	...	...	16·50	16	0	1	...	...	...
November	...	...	...	...	...	...	...	...	...
December	...	...	17·00	16	0	1	...	...	...
January	...	...	16·36	16	0	1	...	...	...
February	...	...	16·33	16	0	1	...	...	...
March	...	...	16·86	16	0	1	...	...	...
April	...	...	...	...	...	...	...	...	...
May	...	...	...	...	...	...	...	...	...
June	...	...	...	...	...	...	...	...	...
					0	8			
Cobourg:—									
July	...	...	18·58	16	0	1	...	...	...
August	...	...	16·94	16	0	1	...	...	...
September	...	...	17·50	16	0	1	...	...	...
October	...	...	18·21	16	0	1	...	...	...
November	...	...	17·58	16	0	1	...	...	...
December	...	...	17 13	16	0	1	...	...	...
January	...	...	17·18	16	0	1	...	...	...
February	...	...	17·35	16	0	1	...	...	...
March	...	...	...	...	0	...	...	...	...
April	...	...	17·78	16	0	1	...	...	...
May	...	...	19·79	16	0	1	...	...	...
June	...	...	18·15	16	0	1	...	...	...
					0	11			
Barrie:—									
July	...	...	...	...	...	...	...	...	...
August	...	...	...	...	...	...	...	...	...
September	...	...	20·61	16	0	1	...	...	...
October	...	...	18·23	16	0	1	...	...	...
November	...	...	22·48	16	0	1	...	...	...
December	...	...	20·64	16	0	1	...	...	...
January	...	...	19·92	16	0	1	...	...	...
February	...	...	22·74	16	0	1	...	...	...
March	...	...	20·87	16	0	1	...	...	...
April	...	...	21·05	16	0	1	...	...	...
May	...	...	20·47	16	0	1	...	...	...
June	...	...	21·07	16	0	1	...	...	...
					0	10			

G—*Continued.*

Inspected during the Year ended 30th June, 1891.

100 Cubic Feet.			Ammonia per 100 Cubic Feet.						Sulphuretted Hydrogen.			Remarks.
Standard. Grains.	Times in excess of Allowance.	No. of Tests.	Highest Grains.	Lowest. Grains.	Average Grains.	Standard. Grains.	Times in excess of Allowance.	No. of Tests.	No. of times absent.	No. of times present.	No. of Tests.	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	....	....	....	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	No illuminating power test; meter out of order.
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
									11	0	11	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	....	....	....	Photometer not in working order.
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
									11	0	11	
....	....	....	....	....	....	....	....	..	....	....	....	
....	....	....	....	....	....	....	....	..	....	....	....	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
									10	0	10	

APPENDIX

Return of the Illuminating Power and Purity of Gas

Inspection Office.	Illuminating Power.						Sulphur per		
	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	No. of tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.			Grains.	Grains.	Grains.
Cornwall—									
July	......	......	......	......	......	......	......	......	......
August	......	......	......	......	......	......	......	......	......
September	......	......	20·93	16	0	1	......	......	......
October	......	......	18·62	16	0	1	......	......	......
November	......	......	17·06	16	0	1	......	......	......
December	......	......	20·02	16	0	1	......	......	......
January	......	......	18·30	16	0	1	......	......	......
February	......	......	18·69	16	0	1	......	......	......
March	......	......	18·30	16	0	1	......	......	......
April	......	......	20·93	16	0	1	......	......	......
May	......	......	20·09	16	0	1	......	......	......
June	......	......	18·69	16	0	1	......	......	......
					0	10			
Dundas—									
July	......	......	17·85	16	0	1	......	......	......
August	......	......	18·72	16	0	1	......	......	......
September	......	......	17·65	16	0	1	......	......	......
October	......	......	19·12	16	0	1	......	......	......
November	......	......	18·19	16	0	1	......	......	......
December	......	......	19·18	16	0	1	......	......	......
January	......	......	19·23	16	0	1	......	......	......
February	......	......	18·06	16	0	1	......	......	......
March	......	......	16·86	16	0	1	......	......	......
April	......	......	17·99	16	0	1	......	......	......
May	......	......	19·23	16	0	1	......	......	......
June	......	......	18·65	16	0	1	......	......	......
					0	12			
Galt—									
July	......	......	24·11	16	0	1	......	......	......
August	......	......	24 66	16	0	1	......	......	......
September	......	......	20·99	16	0	1	......	......	......
October	......	......	19·00	16	0	1	......	......	......
November	......	......	23·12	16	0	1	......	......	......
December	......	......	21·62	16	0	1	......	......	......
January	......	......	21·34	16	0	1	......	......	......
February	......	......	23·55	16	0	1	......	......	......
March	......	......	24·22	16	0	1	......	......	......
April	......	......	25·30	16	0	1	......	......	......
May	......	......	23·55	16	0	1	......	......	......
June	......	......	25·50	16	0	1	......	......	......
					0	12			

G—*Continued.*

Inspected during the Year ended 30th June, 1891.

100 Cubic Feet.			Ammonia per 100 Cubic Feet.						Sulphuretted Hydrogen.			Remarks.
Standard. Grains.	Times in excess of Allowance.	No. of Tests.	Highest Grains	Lowest. Grains.	Average Grains.	Standard. Grains.	Times in excess of Allowance.	No. of Tests.	No. of times absent.	No. of times present.	No. of Tests.	
....	...	...	....	....	....	....	...	...	...	...	...	
....	...	...	....	....	....	....	...	...	...	...	...	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
									10	0	10	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
									12	0	12	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
....	...	...	....	....	....	....	...	...	1	0	1	
									12	0	12	

APPENDIX

Return of the Illuminating Power and Purity of Gas

Inspection Office.	Illuminating Power.						Sulphur per		
	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	No. of Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.			Grains.	Grains.	Grains.
Guelph:—									
July	......	......	19·50	16	0	1	......	......	......
August	......	......	18·00	16	0	1	......	......	......
September	......	......	19·50	16	0	1	......	......	......
October	......	......	18·96	16	0	1	......	......	......
November	......	......	18·94	16	0	1	......	......	......
December	......	......	20·81	16	0	1	......	......	......
January	......	......	19·21	16	0	1	......	......	......
February	......	......	22·31	16	0	1	......	......	......
March	......	......	22·17	16	0	1	......	......	......
April	......	......	19·37	16	0	1	......	......	......
May	......	......	21 24	16	0	1	......	......	......
June	......	......	20·23	16	0	1	......	......	......
					0	12			
Hamilton:—									
July	......	......	17·09	16	0	1	......	......	......
August	......	......	17·20	16	0	1	......	......	......
September	......	......	17·30	16	0	1	......	......	......
October	......	......	18·50	16	0	1	......	......	......
November	......	......	17·85	16	0	1	......	......	......
December	......	......	18·00	16	0	1	......	......	......
January	......	......	17·14	16	0	1	......	......	......
February	......	......	18·50	16	0	1	......	......	......
March	......	......	17·20	16	0	1	......	......	......
April	......	......	17·79	16	0	1	......	......	......
May	......	......	17·65	16	0	1	......	......	......
June	......	......	16·81	16	0	1	......	......	......
					0	12			
Ingersoll:—									
July	......	......	22·00	16	0	1	......	......	......
August	......	......	16·73	16	0	1	......	......	......
September	......	......	20·00	16	0	1	......	......	......
October	......	......	19·91	16	0	1	......	......	......
November	......	......	17·00	16	0	1	......	......	......
December	......	......	21·41	16	0	1	......	......	......
January	......	......	20·92	16	0	1	......	......	......
February	......	......	20·70	16	0	1	......	......	......
March	......	......	19·50	16	0	1	......	......	......
April	......	......	19·50	16	0	1	......	......	......
May	......	......	19·66	16	0	1	......	......	......
June	......	......	20·00	16	0	1	......	......	......
					0	12			

G—*Continued.*

Inspected during the Year ended 30th June, 1891.

100 Cubic Feet.			Ammonia per 100 Cubic Feet.						Sulphuretted Hydrogen.			
Standard. Grains.	Times in excess of Allowance.	No. of Tests.	Highest Grains.	Lowest. Grains.	Average Grains.	Standard. Grains.	Times in excess of Allowance.	No. of Tests.	No. of times absent.	No. of times present.	No. of Tests.	Remarks.
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
									12	0	12	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
									12	0	12	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	0	1	1	Fine: Chap. 25, Sec. 46.
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
									11	1	12	

APPENDIX

RETURN of the Illuminating Power and Purity of Gas

Inspection Office.	Illuminating Power.						Sulphur per		
	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	No. of Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.			Grains.	Grains.	Grains.
Berlin :—									
July	...	...	...	...	...	...	...	...	...
August	...	...	...	...	...	...	...	...	...
September	...	...	...	...	...	...	...	...	...
October	...	...	...	...	...	...	...	...	...
November	...	...	...	...	...	...	...	...	...
December	...	...	19·49	16	0	1	...	...	...
January	...	...	19·84	16	0	1	...	...	...
February	...	...	18·23	16	0	1	...	...	...
March	...	...	17·21	16	0	1	...	...	...
April	...	...	17·61	16	0	1	...	...	...
May	...	...	19·93	16	0	1	...	...	...
June	...	...	18·17	16	0	1	...	...	...
					0	7			
Kingston :—									
July	22·28	20·11	21·40	16	0	4	...	...	...
August	23·51	21·73	22·63	16	0	4	...	...	...
September	23·03	20·20	22·20	16	0	4	...	...	...
October	22·44	20·74	21·67	16	0	4	...	...	...
November	22·61	21·30	21·82	16	0	4	...	...	...
December	22·43	22·00	22·24	16	0	4	...	...	...
January	23·10	21·63	22·50	16	0	4	...	...	...
February	23·56	21·11	22 05	16	0	4	...	...	...
March	21·84	20·26	21·31	16	0	4	...	...	...
April	23·91	21·06	22·24	16	0	4	...	...	...
May	22·11	20·68	21·33	16	0	5	...	...	...
June	23·22	20·86	22·10	16	0	4	...	...	...
					0	49			
Listowell :—									
July	...	...	16·48	16	0	1	...	...	...
August	...	...	21·39	16	0	1	...	...	...
September	...	...	18·66	16	0	1	...	...	...
October	...	...	16·34	16	0	1	...	...	...
November	...	...	18·93	16	0	1	...	...	...
December	...	...	16·49	16	0	1	...	...	...
January	...	...	20·57	16	0	1	...	...	...
February	...	...	20·40	16	0	1	...	...	...
March	...	...	19·58	16	0	1	...	...	...
April	...	...	19·58	16	0	1	...	...	...
May	...	...	20·00	16	0	1	...	...	...
June	...	...	19·49	16	0	1	...	...	...
					0	12			

G—*Continued.*

Inspected during the Year ended 30th June, 1891.

100 Cubic Feet.			Ammonia per 100 cubic Feet.						Sulpuretted Hydrogen.			Remarks.
Standard.	Times in excess of Allowance.	No. of Tests.	Highest	Lowest.	Average	Standard.	Times in excess of Allowance.	No. of Tests.	No. of times absent.	No. of times present.	No. of Tests.	
Grains.			Grains.	Grains.	Grains.	Grains.						
......	....	....	......	......	......	......	....	..	..	....	..	
......	....	....	......	......	......	......	....	..	....	....	....	
......	....	....	......	......	......	......	....	..	....	....	....	
......	....	....	......	......	......	......	....	..	....	....	....	
......	....	....	......	......	......	......	....	..	....	....	....	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
									7	0	7	
......	....	....	......	......	......	......	....	..	4	0	4	
......	....	....	......	......	......	......	....	..	4	0	4	
......	....	....	......	......	......	......	....	..	4	0	4	
......	....	....	......	......	......	......	....	..	4	0	4	
......	....	....	......	......	......	......	....	..	4	0	4	
......	....	....	......	......	......	......	....	..	4	0	4	
......	....	....	......	......	......	......	....	..	4	0	4	
......	....	....	......	......	......	......	....	..	4	0	4	
......	....	....	......	......	......	......	....	..	4	0	4	
......	....	....	......	......	......	......	....	..	4	0	4	
......	....	....	......	......	......	......	....	..	5	0	5	
......	....	....	......	......	......	......	....	..	4	0	4	
									49	0	49	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
									12	0	12	

APPENDIX

Return of the Illuminating Power and Purity of Gas

Inspection Office.	Illuminating Power.						Sulphur per		
	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	No. of Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.			Grains.	Grains.	Grains.
Lindsay :—									
July	...	...	20·47	16	0	1	...	...	...
August	...	...	23·26	16	0	1	...	...	...
September	...	...	...	...	...	...	...	...	...
October	...	...	25·14	16	0	1	...	...	...
November	...	...	21·03	16	0	1	...	...	...
December	...	...	23.80	16	0	1	...	...	...
January	...	...	24·30	16	0	1	...	...	...
February	...	...	20·90	16	0	1	...	...	...
March	...	...	23·62	16	0	1	...	...	...
April	...	...	20·96	16	0	1	...	...	...
May	...	...	21·00	16	0	1	...	...	...
June	...	...	24·60	16	0	1	...	...	...
					0	11			
London :—									
July	23·62	20·91	22·17	16	0	3	...	...	...
August	22·38	20·06	21·41	16	0	3	...	...	...
September	22·80	21·29	21·88	16	0	3	...	...	...
October	23·00	22·67	22·84	16	0	3	...	...	...
November	23·40	23·25	23·33	16	0	3	...	...	...
December	24·00	22·68	23·50	16	0	3	...	...	...
January	23·62	22·85	23·22	16	0	3	...	...	...
February	23·84	22·41	23·18	16	0	3	...	...	...
March	23·00	21·70	22·40	16	0	3	...	...	...
April	21·91	18·94	20·41	16	0	3	...	...	...
May	24·00	22·90	23·57	16	0	3	...	...	...
June	23·84	20·62	22·22	16	0	3	...	...	...
					0	36			
Ottawa :—									
July	19·80	18·00	18·90	16	0	2	20·73	14·21	17·47
August	20·60	19·30	19·95	16	0	2	23·93	15·78	19·85
September	19·63	17·20	18·41	16	0	2	20·86	8·86	14·86
October	21·15	20·69	20·92	16	0	2	22·97	15·92	19·44
November	21·52	18·10	19·81	16	0	2	31·41	15·04	23·22
December	18·70	18·50	18·60	16	0	2	20·82	13·78	17·30
January	19·80	19·60	19·70	16	0	2	25·71	14·01	19·86
February	19·46	18·20	18·83	16	0	2	26·04	15·29	20·66
March	23·40	21·10	22·25	16	0	2	8·59	5·77	7·18
April	20·95	20·81	20·88	16	0	2	14·54	8·90	11·72
May	26·32	19·42	22·87	16	0	2	23·24	8·32	11·78
June	19·62	17·64	18·63	16	0	2	17·12	11·29	14·20
					0	24			

G—*Continued.*

Inspected during the Year ended 30th June, 1891.

100 Cubic Feet.			Ammonia per 100 Cubic Feet.						Sulphuretted Hydrogen.			
Standard.	Times in excess of Allowance.	No. of Tests.	Highest	Lowest.	Average	Standard.	Times in excess of Allowance.	No. of Tests.	No. of times absent.	No. of times present.	No. of Tests.	Remarks.
Grains.			Grains.	Grains.	Grains.	Grains.						
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	....	....	...	Inspector away on leave.
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
									11	0	11	
....	....	....	....	....	....	....	....	..	3	0	3	
....	....	....	....	....	....	....	....	..	3	0	3	
....	....	....	....	....	....	....	....	..	3	0	3	
....	....	....	....	....	....	....	....	..	3	0	3	
....	....	....	....	....	....	....	....	..	3	0	3	
....	....	....	....	....	....	....	....	..	3	0	3	
....	....	....	....	....	....	....	....	..	3	0	3	
....	....	....	....	....	....	....	....	..	3	0	3	
....	....	....	....	....	....	....	....	..	3	0	3	
....	....	....	....	....	....	....	....	..	3	0	3	
....	....	....	....	....	....	....	....	..	3	0	3	
....	....	....	....	....	....	....	....	..	2	0	3	
									36	0	36	
35	0	2	9·35	3·11	6·23	4	1	2	2	0	2	
35	0	2	5·00	4·00	4·50	4	1	2	2	0	2	
35	0	2	5·00	1·00	3·00	4	1	2	2	0	2	
35	0	2	3·57	3·00	3·28	4	0	2	2	0	2	
35	0	2	7·66	4·00	5·83	4	1	2	2	0	2	
35	0	2	7·00	4·00	5·50	4	1	2	2	0	2	
35	0	2	7·00	6·10	6·55	4	2	2	2	0	2	
25	0	2	5·00	4·00	4·50	4	1	2	2	0	2	
35	0	2	7·00	6·00	6·50	4	2	2	4	0	4	
35	0	2	4·55	3·56	4·05	4	1	2	2	0	2	
35	0	2	4·03	1·51	2·77	4	1	2	2	0	2	
35	0	2	2·00	1·19	1·59	4	0	2	2	0	2	
	0	24					12	24	26	0	26	

APPENDIX

RETURN of the Illuminating Power and Purity of Gas

Inspection Office.	Illuminating Power.						Sulphur per 100		
	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	No. of Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.			Grains.	Grains.	Grains.
Napanee:—									
July			21·94	16	0	1			
August			22·27	16	0	1			
September			25·13	16	0	1			
October			20·42	16	0	1			
November			23·15	16	0	1			
December			22·32	16	0	1			
January			21·77	16	0	1			
February			26·15	16	0	1			
March			24·07	16	0	1			
April			25·44	16	0	1			
May			27·64	16	0	1			
June			19·60	16	0	1			
					0	12			
Owen Sound:—									
July			23·85	16	0	1			
August			26·10	16	0	1			
September			21·50	16	0	1			
October			21·90	16	0	1			
November			20·40	16	0	1			
December			21·60	16	0	1			
January			23·90	16	0	1			
February			24·90	16	0	1			
March			22·70	16	0	1			
April			23·27	16	0	1			
May			23·08	16	0	1			
June			21·53	16	0	1			
					0	12			
Peterborough:—									
July			18.09	16	0	1			
August			18.66	16	0	1			
September			Nil.	16	....	....			
October			18.01	16	0	1			
November			18.12	16	0	1			
December			17.23	16	0	1			
January			17.30	16	0	1			
February			17.70	16	0	1			
March			16.70	16	0	1			
April			19.00	16	0	1			
May			17.62	16	0	1			
June			18.88	16	0	1			
					0	11			

G—*Continued.*

Inspected during the year ended 30th June, 1891.

Cubic Feet.			Ammonia per 100 Cubic Feet.						Sulphuretted Hydrogen.			
Standard.	Times in excess of Allowance.	No. of Tests.	Highest	Lowest.	Average	Standard.	Times in excess of Allowance.	No. of Tests.	No. of times absent.	No. of times present.	No. of Tests.	Remarks.
Grains.			Grains.	Grains.	Grains.	Grains.						
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
							....	..	12	0	12	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
							....	..	12	0	12	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	....	....	....	Inspector on leave.
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	0	1	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
							....	..	10	1	11	

APPENDIX

RETURN of the Illuminating Power and Purity of Gas

Inspection Office.	Illuminating Power.						Sulphur per		
	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	No. of Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.			Grains.	Grains.	Grains.
Port Hope:—									
July	......	......	18·00	16	0	1	......	......	......
August	......	......	18·50	16	0	1	......	......	......
September	......	......	17·50	16	0	1	......	......	......
October	......	......	17·35	16	0	1	......	......	......
November	......	......	17·35	16	0	1	......	......	......
December	......	......	18·00	16	0	1	......	......	......
January	......	......	16·64	16	0	1	......	......	......
February	......	......	18·15	16	0	1	......	......	......
March	......	......	18·17	16	0	1	......	......	......
April	......	......	18·01	16	0	1	......	......	......
May	......	......	17·78	16	0	1	......	......	......
June	......	......	17·90	16	0	1	......	......	......
					0	12			
Sarnia:—									
July	......	......	......	......	......	......	......	......	......
August	......	......	......	......	......	......	......	......	......
September	......	......	......	......	......	......	......	......	......
October	......	......	19·20	16	0	1	......	......	......
November	......	......	19·67	16	0	1	......	......	......
December	......	......	19·71	16	0	1	......	......	......
January	......	......	19·20	16	0	1	......	......	......
February	......	......	19·67	16	0	1	......	......	......
March	......	......	19·75	16	0	1	......	......	......
April	......	......	19·71	16	0	1	......	......	......
May	......	......	19·88	16	0	1	......	......	......
June	......	......	19·10	16	0	1	......	......	......
					0	9			
Stratford:—									
July	......	......	......	......	......	......	......	......	......
August September	......	......	16·25	16	0	1	......	......	......
October	......	......	......	......	......	......	......	......	......
November December	......	......	18·24	16	0	1	......	......	......
January	......	......	16·29	16	0	1	......	......	......
February	......	......	18·05	16	0	1	......	......	......
March	......	......	17·51	16	0	1	......	......	......
April	......	......	18·11	16	0	1	......	......	......
May	......	......	17·64	16	0	1	......	......	......
June	......	......	17·73	16	0	1	......	......	......
					0	8			

G—*Continued.*

Inspected during the Year ended 30th June, 1891.

100 Cubic Feet.			Ammonia per 100 Cubic Feet.						Sulphuretted Hydrogen.			Remarks.
Standard. Grains.	Times in excess of Allowance.	No. of Tests.	Highest Grains.	Lowest. Grains.	Average Grains.	Standard. Grains.	Times in excess of Allowance.	No. of Tests.	No. of times absent.	No. of times present.	No. of Tests.	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
									12	0	12	
...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
									9	0	9	
...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
									8	0	8	

APPENDIX

Return of the Illuminating Power and Purity of Gas

Inspection Office.	Illuminating Power.						Sulphur per		
	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	No. of Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.			Grains.	Grains.	Grains.
Stratford (Gordon Co.)—									
July									
August									
September									
October									
November									
December									
January									
February									
March									
April									
May									
June									
St. Catharines:—									
July			17·45	16	0	1			
August			18·65	16	0	1			
September			19·81	16	0	1			
October			18·70	16	0	1			
November			18·29	16	0	1			
December			17·70	16	0	1			
January			18·35	16	0	1			
February			19·00	16	0	1			
March			18·50	16	0	1			
April			19·50	16	0	1			
May			18·29	16	0	1			
June			21·66	16	0	1			
					0	12			
St. Thomas:—									
July			17·20	16	0	1			
August			16·48	16	0	1			
September			17·16	16	0	1			
October			17·63	16	0	1			
November			16·70	16	0	1			
December			16·86	16	0	1			
January			16·91	16	0	1			
February			16·86	16	0	1			
March			16·86	16	0	1			
April			16·86	16	0	1			
May			16·70	16	0	1			
June			17·40	16	0	1			
					0	12			

G—*Continued.*

Inspected during the Year ended 30th June, 1891.

100 Cubic Feet.			Ammonia per 100 Cubic Feet.						Sulphuretted Hydrogen.			Remarks.
Standard. Grains.	Times in excess of Allowance.	No. of Tests.	Highest Grains.	Lowest. Grains.	Average Grains.	Standard. Grains.	Times in excess of Allowance.	No. of Tests.	No. of times absent.	No. of times present.	No. of Tests.	
....	....	....	....	....	....	....	....	..	....	....	....	For purity only.
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	....	....	....	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
									8	0	8	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
									12	0	12	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
									12	0	12	

APPENDIX

RETURN of the Illuminating Power and Purity of Gas

Inspection Office.	Illuminating Power.						Sulphur per		
	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	No. of Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.			Grains.	Grains.	Grains.
Toronto:—									
July	18·20	17·47	17·84	16	0	9	13·97	11·30	12·63
August	18·70	17·15	17·78	16	0	9	17·94	14·62	16·28
September	18·36	17·14	17·79	16	0	9	13·85	11·68	12·76
October	18·65	17·24	18·10	16	0	8	13·67	12·56	13·11
November	22·11	16·63	19·32	16	0	9	21·69	14·15	17·92
December	19·96	18·08	18·64	16	0	9	11·49	9·08	10·28
January	21·75	16·54	19·71	16	0	9	11·29	8·22	9·75
February	22·58	20·32	21·22	16	0	8	16·65	15·26	15·95
March	22·90	20·10	21·55	16	0	9	17·03	15·14	16·08
April	22·36	20·71	21·66	16	0	8	12·26	9·68	10·97
May	22·70	20·10	21·30	16	0	9	19·23	9·60	14·41
June	22·31	19·16	21·00	16	0	9	11·88	6·51	9·19
					0	105			
Windsor:—									
July	......	......	17·00	16	0	1	......	......	......
August	......	......	16·90	16	0	1	......	......	......
September	......	......	17·04	16	0	1	......	......	......
October	......	......	16·62	16	0	1	......	......	......
November	......	......	17·00	16	0	1	......	......	......
December	......	......	16·50	16	0	1	......	......	......
January	......	......	16·10	16	0	1	......	......	......
February	......	......	16·40	16	0	1	......	......	......
March	......	......	16·36	16	0	1	......	......	......
April	......	......	16·36	16	0	1	......	......	......
May	......	......	16·77	16	0	1	......	......	......
June	......	......	17·00	16	0	1	......	......	......
					0	12			
Woodstock:—									
July	......	......	18·37	16	0	1	......	......	......
August	......	......	19·00	16	0	1	......	......	......
September	......	......	21·98	16	0	1	......	......	......
October	......	......	20·00	16	0	1	......	......	......
November	......	......	18·27	16	0	1	......	......	......
December	......	......	18·50	16	0	1	......	......	......
January	......	......	20·00	16	0	1	......	......	......
February	......	......	20·23	16	0	1	......	......	......
March	......	......	18·84	16	0	1	......	......	......
April	......	......	20·03	16	0	1	......	......	......
May	......	......	20·00	16	0	1	......	......	......
June	......	......	20·00	16	0	1	......	......	......
					0	12			

G—*Continued.*

Inspected during the Year ended 30th June, 1891.

100 Cubic Feet.			Ammonia per 100 Cubic Feet.						Sulphuretted Hydrogen.			
Standard.	Times in excess of Allowance.	No. of Tests.	Highest	Lowest.	Average	Standard.	Times in excess of Allowance	No. of Tests.	No. of times absent.	No. of times present.	No. of Tests.	Remarks.
Grains.			Grains.	Grains.	Grains.	Grains.						
35	0	2	0·23	0·10	·16	4	0	2	9	0	9	
35	0	2	.02	·01	·01	4	0	2	9	0	9	
35	0	2	2·00	·50	1·25	4	0	2	9	0	9	
35	0	2	3·03	2·03	2·53	4	0	2	8	0	8	
35	0	2	3·56	2·	2·78	4	0	2	9	0	9	
35	0	2	·84	·47	·61	4	0	2	9	0	9	
35	0	2	1·24	·87	1·01	4	0	2	9	0	9	
35	0	2	2·02	·42	1·22	4	0	2	8	0	8	
35	0	2	1·50	·00	·75	4	0	2	9	0	9	
35	0	2	·05	·01	·32	4	0	2	8	0	8	
35	0	2	·15	·04	·99	4	0	2	9	0	9	
35	0	2	3·76	1·75	2·45	4	0	2	9	0	9	
	0	24					0	24	105	0	105	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
									12	0	12	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	0	1	1	Fine imposed.
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	0	1	1	Fine imposed.
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
									10	2	12	

APPENDIX

RETURN of the Illuminating Power and Purity of Gas

Inspection Office.	Illuminating Power.						Sulphur per		
	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	No. of Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.			Grains.	Grains.	Grains.
Montreal :—									
July	18·60	17·38	17·96	16	0	8	38·91	30·61	34·76
August	19·37	17·44	18·31	16	0	8	35·39	32·58	33·98
September	18·66	16·56	17·43	16	0	9	32·28	30·53	31·40
October	18·46	16·82	17·62	16	0	10	41·51	32·78	37·14
November	18·89	17·11	17·84	16	0	8	54·41	31·71	38·56
December	19·47	17·28	18·39	16	0	9	32·19	13·33	26·44
January	19·20	16·32	17·93	16	0	9	28·97	12·75	19·25
February	20·18	17·23	18·29	16	0	7	17·68	11·36	15·20
March	19·90	16·57	17·83	16	0	8	18·36	12·26	15·31
April	19·48	17·46	18·33	16	0	9	17·39	15·08	16·46
May	18·43	17·25	17·81	16	0	9	20·99	18·02	19·50
June	19·05	16·72	18·07	16	0	9	25·69	22·18	23·93
					0	103			
Quebec :—									
July	....	....	17·33	16	0	1	....	....	16·81
August	....	....	21·83	16	0	1	24·41	14·60	19·50
September	....	....	18·18	16	0	1	24·49	24·12	24·30
October	....	....	16·29	16	0	1	22·27	16·63	19·45
November	....	....	16·26	16	0	1	32·71	24·30	28·50
December	....	....	17·34	16	0	1	30·63	20·93	25·78
January	....	....	16·81	16	0	1	27·54	18·45	22·99
February	....	....	17·69	16	0	1	27·19	18·75	22·97
March	....	....	Nil.	....	....	...	35·20	27·89	31·54
April	....	....	17·36	16	0	1	20·41	19·55	19·98
May	....	....	18·33	16	0	1	24·43	8·42	16·42
June	....	....	17·84	16	0	1	30·31	5·56	17·93
					0	11			
Sherbrooke :—									
July	....	....	24·71	16	0	1	....	....	....
August	....	....	27·45	16	0	1	....	....	....
September	....	....	27·64	16	0	1	....	....	....
October	....	....	24·47	16	0	1	....	....	....
November	....	....	26·97	16	0	1	....	....	....
December	....	....	26·13	16	0	1	....	....	....
January	....	....	....	....	...	...	....	....	....
February	....	....	....	....	...	...	....	....	....
March	....	....	27·64	16	0	1	....	....	....
April	....	....	27·97	16	0	1	....	....	....
May	....	....	25·83	16	0	1	....	....	....
June	....	....	26·81	16	0	1	....	....	....
					0	10			

G—*Continued.*

Inspected during the Year ended 30th June, 1891.

100 Cubic Feet.			Ammonia per 100 Cubic Feet.						Sulphuretted Hydrogen.			Remarks.
Standard.	Times in excess of Allowance.	No. of Tests.	Highest	Lowest.	Average	Standard.	Times in excess of Allowance.	No. of Tests.	No. of times absent.	No. of times present.	No. of Tests.	
Grains.			Grains.	Grains.	Grains.	Grains.						
35	1	2	0	0	0	4	0	2	8	0	8	
35	1	2	0	0	0	4	0	2	8	0	8	
35	0	2	0	0	0	4	0	2	9	0	9	
35	1	2	0	0	0	4	0	2	11	1	12	
35	2	5	0	0	0	4	0	5	8	0	8	
35	0	5	0	0	0	4	0	5	9	0	9	
35	0	4	0	0	0	4	0	4	9	0	9	
35	0	3	0	0	0	4	0	3	7	0	7	
35	0	2	0	0	0	4	0	2	8	0	8	
35	0	4	0	0	0	4	0	4	9	0	9	
35	0	2	0	0	0	4	0	2	9	0	9	
35	0	2	0	0	0	4	0	2	9	0	9	
	5	35					0	35	104	1	105	
35	0	1	0	0	0	4	0	1	2	0	2	
35	0	2	0	0	0	4	0	2	2	0	2	
35	0	2	0	0	0	4	0	2	2	0	2	
35	0	2	0	0	0	4	0	2	2	0	2	
35	0	2	0	0	0	4	0	2	2	0	2	
35	0	2	0	0	0	4	0	2	2	0	2	
35	0	2	0	0	0	4	0	2	2	0	2	
35	0	2	0	0	0	4	0	2	2	0	2	
35	1	2	0	0	0	4	0	2	1	0	1	No illuminating power test. Photo. out of order, having meter repaired.
35	0	2	0	0	0	4	0	2	2	0	2	
35	0	2	0	0	0	4	0	2	2	0	2	
35	0	2	0	0	0	4	0	2	2	0	2	
	1	23					0	23	23	0	23	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	....	....	....	No gas supplied to the city.
......	....	....	......	......	......	......	....	..				do do
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
......	....	....	......	......	......	......	....	..	1	0	1	
	...	....					....	..	10	0	10	

APPENDIX

RETURN of the Illuminating Power and Purity of Gas

Inspection Office.	Illuminating Power.						Sulphur per 100		
	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	No of Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.			Grains.	Grains.	Grains.
Three Rivers :—									
July	......	......	......	......	...	...	......	......	......
August	......	......	......	......	...	...	......	......	......
September	......	......	......	......	...	...	......	......	......
October	......	......	......	......	...	...	......	......	......
November	......	......	......	......	...	...	......	......	......
December	......	......	......	......	...	...	......	......	......
January	......	......	......	......	...	...	......	......	......
February	......	......	......	......	...	...	......	......	......
March	......	......	......	......	...	...	......	......	......
April	......	......	......	......	...	...	......	......	......
May	......	......	......	......	...	...	......	......	......
June	......	......	......	......	...	...	......	......	......
Chatham, N.B. :—									
July	......	......	......	......	...	...	......	......	......
August	16·42	16·27	16·34	16	0	2	......	......	......
September	16·33	16·10	16·21	16	0	3	......	......	......
October	16·53	16·08	16·32	16	0	3	......	......	......
November	16·47	16·05	16·26	16	0	3	......	......	......
December	16·46	16·11	16·26	16	0	3	......	......	......
January	16·76	16·14	16·51	16	0	3	......	......	......
February	16·53	16·10	16·34	16	0	3	......	......	......
March	16·56	16·33	16·45	16	0	3	......	......	......
April	......	......	......	......	...	...	......	......	......
May	......	......	......	......	...	...	......	......	......
June	16·53	16·11	16·32	16	0	2	......	......	......
					0	25			
Fredericton :—									
July	......	......	16·59	16	0	1	......	......	......
August	......	......	17·23	16	0	1	......	......	......
September	......	......	16·91	16	0	1	......	......	......
October	......	......	16·08	16	0	1	......	......	......
November	......	......	16·77	16	0	1	......	......	......
December	......	......	16·36	16	0	1	......	......	......
January	......	......	16·46	16	0	1	......	......	......
February	......	......	17·07	16	0	1	......	......	......
March	......	......	16·65	16	0	1	......	......	......
April	......	......	17·25	16	0	1	......	......	......
May	......	......	17·08	16	0	1	......	......	......
June	......	......	17·37	16	0	1	......	......	......
					0	12			

G—*Continued.*

Inspected during the Year ended 30th June, 1891.

Cubic Feet.			Ammonia per 100 Cubic Feet.						Sulphuretted Hydrogen.			
Standard. Grains.	Times in excess of Allowance.	No. of Tests.	Highest Grains.	Lowest. Grains.	Average Grains.	Standard. Grains.	Times in excess of Allowance.	No. of Tests.	No. of times absent.	No. of times present.	No. of Tests.	Remarks.
....	....	....	....	....	....	....	....	....	....	....	....	Gas Co. making no gas.
....	....	....	....	....	....	....	....	....	....	....	....	do do
....	....	....	....	....	....	....	....	....	....	....	....	do do
....	....	....	....	....	....	....	....	....	....	....	....	do do
....	....	....	....	....	....	....	....	....	....	....	....	do do
....	....	....	....	....	....	....	....	....	....	....	....	do do
....	....	....	....	....	....	....	....	....	....	....	....	do do
....	....	....	....	....	....	....	....	....	....	....	....	do do
....	....	....	....	....	....	....	....	....	....	....	....	do do
....	....	....	....	....	....	....	....	....	....	....	....	do do
....	....	....	....	....	....	....	....	....	....	....	....	do do
....	....	....	....	....	....	....	....	....	....	....	....	do do
....	....	....	....	....	....	....	....	....	....	....	....	Instruments out of order
....	....	....	....	....	....	....	....	....	2	0	2	
....	....	....	....	....	....	....	....	....	3	0	3	
....	....	....	....	....	....	....	....	....	3	0	3	
....	....	....	....	....	....	....	....	....	3	0	3	
....	....	....	....	....	....	....	....	....	3	0	3	
....	....	....	....	....	....	....	....	....	3	0	3	
....	....	....	....	....	....	....	....	....	3	0	3	
....	....	....	....	....	....	....	....	....	3	0	3	
....	....	....	....	....	....	....	....	....	....	....	....	Office injured by fire.
....	....	....	....	....	....	....	....	....	....	....	....	Office not re-fitted.
....	....	....	....	....	....	....	....	....	2	0	2	
							....	....	25	0	25	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
....	....	....	....	....	....	....	....	....	1	0	1	
							....	....	12	0	12	

APPENDIX

Return of the Illuminating Power and Purity of Gas

Inspection Office.	Illuminating Power.						Sulphur per		
	Highest.	Lowest.	Average.	Standard.	No. of times below standard.	No. of Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.			Grains.	Grains.	Grains.
Moncton:—									
July	...	...	...	...	...	...	...	...	...
August	17·35	17·20	17·27	16	0	2	...	...	...
September	...	...	...	...	...	...	...	...	...
October	17·33	16·42	17·00	16	0	3	...	...	...
November	...	...	...	...	...	...	...	...	...
December	16·64	16·36	16·50	16	0	3	...	...	...
January	...	...	...	...	...	...	...	...	...
February	...	...	...	...	...	...	...	...	...
March	...	...	...	...	...	...	...	...	...
April	16·98	16·13	16·44	16	0	3	...	...	...
May	...	...	...	...	...	...	...	...	...
June	16·34	16·14	16·25	16	0	3	...	...	...
					0	14			
St. John, N.B.:—									
July	17·17	16·36	16·83	16	0	7	18·56	14·07	16·15
August	16·74	16·40	16·61	16	0	3	17·11	14·91	16·31
September	18·04	16·36	16·87	16	0	7	20·42	16·04	17·90
October	17·69	16·74	17·34	16	0	7	23·07	16·78	19·53
November	17·71	16·86	17·35	16	0	7	20·33	17·42	18·93
December	18·03	17·01	17·57	16	0	7	19·18	17·34	18·41
January	17·35	16·18	16·79	16	0	8	19·97	16·69	17·82
February	17·06	16·22	16·69	16	0	7	18·95	17·31	18·11
March	17·20	16·04	16·62	16	0	7	17·16	15·77	16·45
April	18·06	17·11	17·44	16	0	7	63·30	19·55	41·42
May	17·21	16·57	17·05	16	0	5	66·61	59·61	62·55
June	16·70	16·02	16·37	16	0	5	59·53	31·98	42·37
					0	77			
Halifax:—									
July	...	...	17·20	16	0	1	...	...	8·23
August	17·31	17·14	17·22	16	0	1	8·47	8·08	8·27
September	16·32	16·00	16·16	16	0	2	11·36	10·36	10·86
October	18·37	17·14	17·75	16	0	2	8·48	7·03	7·75
November	16·84	16·78	16·81	16	0	2	8·39	5·26	6·82
December	19·36	17·25	18·30	16	0	2	8·12	7.95	8·03
January	17·58	17·37	17·47	16	0	2	11·06	8·86	9·96
February	16·22	16·04	16·13	16	0	2	11·06	5·94	8·50
March	16·86	16·30	16·58	16	0	2	8·22	7·66	7·94
April	17·97	17·94	17·95	16	0	2	9·96	9·96	9·96
May	...	...	18·31	16	0	1	...	...	...
June	18·00	17·43	17·71	16	0	2	12·73	6·48	9·60
					0	21			

G—*Continued.*

Inspected during the Year ended 30th June, 1891.

100 Cubic Feet.			Ammonia per 100 Cubic Feet.						Sulphuretted Hydrogen.			Remarks.
Standard.	Times in excess of Allowance.	No. of Tests.	Highest	Lowest.	Average	Standard.	Times in excess of Allowance.	No. of Tests.	No. of times absent.	No. of times present.	No. of Tests.	
Grains.			Grains.	Grains.	Grains.	Grains.						
......	...	...	......	......	......	......	...	..	...	...	...	
......	...	...	......	......	......	......		..	2	0	2	
......	...	...	......	......	......	......	...	..	...	...	...	
......	...	...	......	......	......	......	...	..	3	0	3	
......	...	...	......	......	......	......	...	..	...	...	...	
......	...	...	......	......	......	......	...	..	3	0	3	
......	...	...	......	......	......	......	...	..	...	...	...	
......	...	...	......	......	......	......	...	..	...	...	...	
......	...	...	......	......	......	......	...	..	...	...	...	
......	...	...	......	......	......	......	...	..	3	0	3	
......	...	...	......	......	......	......	...	..	...	...	...	
......	...	...	......	......	......	......	...	..	3	0	3	
									14	0	14	
35	0	5	1·04	0·	0·47	4	0	5	7	0	7	
35	0	3	·95	0·	·50	4	0	3	3	0	3	
35	0	4	1·05	0·	·42	4	0	4	7	0	7	
35	0	4	3·74	1·89	2·89	4	0	4	7	0	7	
35	0	4	1·05	0·00	·42	4	0	4	7	0	7	
35	0	4	1·16	·85	1·05	4	0	4	7	0	7	
35	0	4	4·03	2·73	3·20	4	0	4	8	0	8	
35	0	4	3·90	1·18	2·80	4	0	4	7	0	7	
35	0	4	1·53	·45	1·08	4	0	4	7	0	7	
35	1	2	3 18	2·60	2·89	4·	0	2	7	0	7	
35	3	3	3·17	1·30	2·25	4	0	3	5	0	5	
35	2	3	1·57	·96	1·26	4	0	3	5	0	5	
	6	44					0	44	77	0	77	
35	0	1	......	......	0·50	4	0	1	1	0	1	
35	0	2	0·	0·	0·	4	0	2	2	0	2	
35	0	2	1·24	·75	·99	4	0	2	2	0	2	
35	0	2	·30	·00	·15	4	0	2	2	0	2	
35	0	2	1 60	·71	1·15	4	0	2	2	0	2	
35	0	2	1·51	·00	·75	4	0	2	2	0	2	
35	0	2	·0	·0	·0	4	0	2	2	0	2	
35	0	2	·0	·0	·0	4	0	2	2	0	2	
35	0	2	·0	·0	·0	4	0	2	2	0	2	
35	0	1	·75	·75	·75	4	0	1	2	0	2	
......	...	...	......	......	......	......	...	..	1	0	1	Only illuminating power, owing to illness.
35	0	2	·0	·0	·0	4	0	2	2	0	2	
	0	20					0	20	22	0	22	

APPENDIX

RETURN of the Illuminating Power and Purity of Gas

Inspection Office.	Illuminating Power.						Sulphur per		
	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	No. of Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.			Grains.	Grains.	Grains.
Pictou :—									
July	....	....	20·03	16	0	1	....	....	....
August	....	....	19·08	16	0	1	....	....	....
September	....	....	19·25	16	0	1	....	....	....
October	....	....	17·71	16	0	1	....	....	....
November	....	....	18·83	16	0	1	....	....	....
December	....	....	19·85	16	0	1	....	....	....
January	....	....	19·77	16	0	1	....	....	....
February	....	....	19·13	16	0	1	....	....	....
March	....	....	18·25	16	0	1	....	....	....
April	....	....	18·49	16	0	1	....	....	....
May	....	....	18·84	16	0	1	....	....	....
June	....	....	18·92	16	0	1	....	....	....
					0	12			
Yarmouth :—									
July	....	....	17·19	16	0	1	....	....	....
August	....	....	16·66	16	0	1	....	....	....
September	....	....	17·24	16	0	1	....	....	....
October	....	....	17·14	16	0	1	....	....	....
November	....	....	18·00	16	0	1	....	....	....
December	....	....	18·36	16	0	1	....	....	....
January	....	....	16·20	16	0	1	....	....	....
February	....	....	16·18	16	0	1	....	....	....
March	....	....	17·60	16	0	1	....	....	....
April	....	....	16·61	16	0	1	....	....	....
May	....	....	....	....	....	....	....	....	....
June	....	....	16·36	16	0	1	....	....	....
					0	11			
Charlottetown :—									
July	18·64	17·25	17·92	16	0	3	....	....	....
August	18·93	18·18	18·55	16	0	3	....	....	....
September	18·80	18·36	18·55	16	0	3	....	....	....
October	19·98	17·74	18·88	16	0	3	....	....	....
November	19·70	18·50	18·94	16	0	3	....	....	....
December	19·00	18·01	18·52	16	0	3	....	....	....
January	19·30	18·00	18·62	16	0	3	....	....	....
February	18·23	17·54	17·79	16	0	3	....	....	....
March	18·11	17·50	17·78	16	0	3	....	....	....
April	20·16	19·19	19·63	16	0	3	....	....	....
May	19·31	19·00	19·11	16	0	3	....	....	....
June	18·85	18·36	18·64	16	0	3	....	....	....
					0	36			

G—*Continued.*

Inspected during the Year ended 30th June, 1891.

100 Cubic Feet.			Ammonia per 100 Cubic Feet.						Sulphuretted Hydrogen.			Remarks.
Standard. Grains.	Times in excess of Allowance.	No. of Tests.	Highest Grains.	Lowest. Grains.	Average Grains.	Standard. Grains.	Times in excess of Allowance.	No. of Tests.	No. of times absent.	No. of times present.	No. of Tests.	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
									12	0	12	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	1	0	1	
...	...	...	...	...	...	...	...	...	...	...	...	No test; Inspector ill.
...	...	...	...	...	...	...	...	...	1	0	1	
									11	0	11	
...	...	...	...	...	...	...	...	...	3	0	3	
...	...	...	...	...	...	...	...	...	3	0	3	
...	...	...	...	...	...	...	...	...	3	0	3	
...	...	...	...	...	...	...	...	...	3	0	3	
...	...	...	...	...	...	...	...	...	3	0	3	
...	...	...	...	...	...	...	...	...	3	0	3	
...	...	...	...	...	...	...	...	...	3	0	3	
...	...	...	...	...	...	...	...	...	3	0	3	
...	...	...	...	...	...	...	...	...	3	0	3	
...	...	...	...	...	...	...	...	...	3	0	3	
...	...	...	...	...	...	...	...	...	3	0	3	
...	...	...	...	...	...	...	...	...	3	0	3	
									36	0	36	

APPENDIX

RETURN of the Illuminating Power and Purity of Gas

Inspection Office.	Illuminating Power.						Sulphur per 100		
	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	No. of Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.			Grains.	Grains.	Grains.
Winnipeg :—									
July	....	....	20·51	16	0	1	....	....	....
August	....	....	20·11	16	0	1	....	....	....
September	....	....	21·50	16	0	1	....	....	....
October	....	....	20·40	16	0	1	....	....	....
November	....	....	21·00	16	0	1	....	....	....
December	....	....	20·11	16	0	1	....	....	....
January	....	....	20·52	16	0	1	....	....	....
February	....	....	20·54	16	0	1	....	....	....
March	....	....	19·91	16	0	1	....	....	....
April	....	....	19·34	16	0	1	....	....	....
May	....	....	19·04	16	0	1	....	....	....
June	....	....	20·39	16	0	1	....	....	....
					0	12			
Victoria :—									
July	18·46	17·96	18·21	16	0	2	....	....	....
August	18·33	17·90	18·17	16	0	3	....	....	....
September	18·39	17·70	18·02	16	0	3	....	....	....
October	....	....	....	....	....	....	....	....	....
November	19·02	17·76	18·33	16	0	3	....	....	....
December	18·24	18·10	18·17	16	0	2	....	....	....
January	18·70	17·94	18·42	16	0	3	....	....	....
February	18·41	17·74	18·09	16	0	3	....	....	....
March	....	....	18·24	16	0	1	....	....	....
April	....	....	....	....	....	....	....	....	....
May	18·91	17·90	18·26	16	0	3	....	....	....
June	18·87	18·26	18·65	16	0	3	....	....	....
					0	26			

G—*Concluded.*

Inspected during the Year ended 30th June, 1891.

Cubic Feet.			Ammonia per 100 Cubic Feet.						Sulphuretted Hydrogen.			Remarks.
Standard.	Times in excess of Allowance.	No. of Tests.	Highest	Lowest.	Average	Standard.	Times in excess of Allowance.	No. of Tests.	No. of times absent.	No. of times present.	No. of Tests.	
Grains.			Grains.	Grains.	Grains.	Grains.						
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	1	0	1	
									12	0	12	
....	....	....	....	....	....	....	....	..	2	0	2	
....	....	....	....	....	....	....	....	..	3	0	3	
....	....	....	....	....	....	....	....	..	3	0	3	
....	....	....	....	....	....	....	....	..	....	....	....	
....	....	....	....	....	....	....	....	..	3	0	3	
....	....	....	....	....	....	....	....	..	2	0	2	
....	....	....	....	....	....	....	....	..	3	0	3	
....	....	....	....	....	....	....	....	..	3	0	3	
....	....	....	....	....	....	....	....	..	1	0	1	
....	....	....	....	....	....	....	....	..	....	....	....	
....	....	....	....	....	....	....	....	..	3	0	3	
....	....	....	....	....	....	....	....	..	3	0	3	
									26	0	26	

REPORT, RETURNS AND STATISTICS

OF THE

INLAND REVENUES

OF THE

DOMINION OF CANADA

FOR THE

FISCAL YEAR ENDED 30th JUNE

1891

PART III

ADULTERATION OF FOOD

Presented to both Houses of Parliament by Command of His Excellency.

JOHN COSTIGAN,
Minister of Inland Revenue.

PRINTED BY ORDER OF PARLIAMENT

OTTAWA:
PRINTED BY S. E. DAWSON, PRINTER TO THE QUEEN'S MOST
EXCELLENT MAJESTY
1892

[*No.* 6*b*—1891.] *Price* 15 *cents.*

CONTENTS.

			Page.
Commissioner's Report			1
Report of Chief Analyst			3
Public Analysts' Reports—			
District of		Nova Scotia	4
do		New Brunswick	5
do		Quebec	6
do		Montreal	7
do		Kingston	8
do		Toronto	16
do		London	22
do		Manitoba	23
Appendix C.—Inspection of Drugs, &c			24
Special Reports—			
Bulletin No.	17.	Milk supply of towns	75
do	18.	Ottawa and Magog River waters	83
do	19.	Mustard	91
do	20.	Pepper	105
do	21.	Milk in Western Ontario and Manitoba	121
do	22.	Fertilizers	129
do	23.	Sweet Spirits of Nitre and Diluted Prussia Acid	142
do	24.	Tea	146
do	25.	Sugars, Syrups and Molasses	162
do	26.	Baking Powder Materials	175
do	27.	Distilled Liquors	202

ANALYSIS OF FOOD, DRUGS AND FERTILIZERS.

To the Honourable
The Minister of Inland Revenue.

SIR,—I have the honour herewith to submit my report respecting the analysis of food, &c., also the reports of the analysts appointed under the Act.

The following is a summary statement of the whole number of samples reported upon by the official analysts:—

SUMMARY of the whole number of Samples analysed by the Public Analysts of the Dominion for the Year ending the 30th June, 1891.

—	Genuine	Adulterated	Doubtful.	Total.
Coffee	16	32	....	48
Drugs	6	12	....	18
Liquors	151	13	11	175
Lard	9	21	....	30
Mustard	5	25	....	30
Milk	149	49	44	242
Pepper	17	28	8	53
Sugar and syrup	239	13	....	252
Tea	76	....	....	76
Vinegar	....	8	2	10
	668	201	65	934

The following bulletins were published regarding samples collected up to the 30th June, 1891, and from an appendix to this report:—

No. 17. Milk supply of towns.
18. Ottawa and Magog River waters.
19. Mustard.
20. Pepper.
21. Milk in Western Ontario and Manitoba.
22, Fertilizers.
23. Sweet spirits of nitre; Diluted prussic acid.
24. Tea.
25. Sugars, syrups and molasses.
26. Baking powder materials.
27. Distilled liquors.

It will be seen that of the 934 samples analysed by the official analysts, 201, or more than 20 per cent, were found to be adulterated.

The publication of the names of parties so offending against the law appears to be insufficient as a deterrent, and in future prosecution will have to be resorted to, in order to cause the law to be respected.

The difficulty of obtaining convictions in the event of frauds in respect of articles as to which no standard of quality has yet been determined, as provided for by section 19 of the Adulteration Act, points to the advisability of early steps being taken to fortify the department in this respect. At my request, Mr. Macfarlane, the chief analyst, has suggested certain specific standards for articles, which have recently been the subject of searching and careful analysis, and his recommendations are appended hereto, in the hope that they may be canvassed by the public before any final steps are taken towards giving them legal force.

The bulletins from time to time issued by the department, and reproduced with this report, will be found to be of considerable interest. I am not aware that they call for any further remarks than have already been made by the chief analyst.

Complaints have been made by certain manufacturers of the mention of their names in connection with samples indiscriminately taken from retailers. It will, however, be observed that the names are given as the "alleged" manufacturers only, or parties from whom the goods are stated to have been purchased by the vendor.

In the case of liquors it is quite clear that some, at least, have undergone manipulation after reaching the hands of the retailers, for which the original vendor is in no way responsible.

I have the honour to be, Sir,
Your obedient servant,
E. MIALL,
Commissioner Inland Revenue.

REPORT OF CHIEF ANALYST.

LABORATORY OF THE INLAND REVENUE DEPARTMENT,
OTTAWA, 27th November. 1891.

The Commissioner of Inland Revenue,
Ottawa.

SIR,—In accordance with your request, I have to state the nature of the recommendations which I have made from time to time, as regards the establishment of standards of quality for, and limits of variability permissible in certain articles of food, with the view of obtaining action by the Governor in Council under section 19 of the Adulteration Act.

Milk.

Whole milk shall not contain less than 3·5 per cent butter fat, 8·5 p.c, other solids, and 12 p.c. total solids. Skimmed milk shall not contain less than 9 p.c. total solids.

Coffee.

When coffee is sold as a mixture or compound it shall contain only chicory and coffee; the proportion of the former not to exceed 20 p.c.

Lard.

When sold as a compound it should not contain more than 10 p.c. of beef tallow.

Baking Powder.

Shall not contain more thad 20 p.c. starch or flour, and be entirely free from substances containing alumina.

Butter.

Shall not contain more than 15 p.c. water, 5 p.c. salt and 2 p.c. curd.

Mustard.

The genuine article shall not contain less than 30 p.c. fixed oil, and the compound or mixture not less than 22 p.c.

Peppers.

Shall not contain more than 8 p.c. ash.

Molasses.

Shall not contain less than 40 p.c. cane sugar.

Syrups.

Shall not contain less than 35 p.c. cane sugar.

Brandy.

Shall not contain less than 48 p.c. by volume of alcohol, and not more than 0·2 p.c. of total solids.

Rum.

Shall not contain less than 48 p.c. by volume of alcohol.

Whiskey.

Shall not contain less than 48 p.c. by volume of alcohol, and not more than 0·2 p.c. of total solids.

Hollands and Old Tom.

These liquors shall not contain less than 48 p.c. by volume of alcohol.

I have the honour to be, Sir,
Your obedient servant,
THOMAS MACFARLANE,
Chief Analyst.

REPORTS OF PUBLIC ANALYISTS

1.—DISTRICT OF PRINCE EDWARD ISLAND AND NOVA SCOTIA.

Laboratory of the Public Analyst for
Nova Scotia and Prince Edward Island,
66 Bedford Row, Halifax, N.S., 28th September, 1891.

The Commissioner of Inland Revenue,
Ottawa.

Sir,—I have the honour to submit my report on the samples submitted to me under the Adulteration Act during the year ending the 30th June, 1891.

Of the 132 samples examined, 88 were found genuine and 44 adulterated, as follows:—

—	Genuine.	Adulterated.	Total.
Mustard	5	25	30
Sugar	24	0	24
Molasses and syrup	24	0	24
Coffee	5	19	24
Liquors	30	0	30
	88	44	132

Mustard.

Only five, or 20 per cent, of these came within the limit allowed. In the remainder mustard was present in various quantities down to 15 per cent; two contained calcium sulphate and one exhausted cake. Flour of different kinds formed the chief addition, assisted by turmeric and cayenne.

Sugars.

The different grade of refined were all of good quality, especially the granulated. The label on sample 10616, reading Porto Rico, is probably an error for Demerara.

Molasses and Syrup.

No adulteration detected though some variation in quality found.

Coffee.

Twenty per cent were free from adulteration. Of the remainder, chicory was estimated to be present in quantities varying from 10 to 35 per cent, the average being 21 per cent. In fifteen samples roasted grain was found. The result may be shown as follows:—

Genuine	20·8	per cent.
Adulteration with chicory	16·7	do
do chicory and roasted grain	62·5	do

Liquors.

No adulteration detected.

I have the honour to be, Sir,
Your obedient servant,
MAYNARD BOWMAN.

2.—DISTRICT OF NEW BRUNSWICK.

CHEMICAL LABORATORY, 74 GERMAIN ST.,
ST. JOHN, N.B., 27th November, 1891.

The Commissioner of Inland Revenue,
Ottawa.

SIR,—I have the honour to submit to you my report on samples of food and liquors received for analysis during the year ending 30th June, 1891.

The following samples were examined, viz.:—

Sugar	18
Syrup	8
Molasses	10
Whiskey	14
Rum	1
Gin	1

None of these samples were classed as adulterated, and with the exception of a rather low alcohol strength in some of the liquors nothing objectionable was found.

I have the honour to be, Sir,
Your obedient servant,
W. F. BEST,
Public Analyst.

REPORTS OF PUBLIC ANALYISTS

1.—DISTRICT OF PRINCE EDWARD ISLAND AND NOVA SCOTIA.

LABORATORY OF THE PUBLIC ANALYST FOR
NOVA SCOTIA AND PRINCE EDWARD ISLAND,
66 BEDFORD ROW, HALIFAX, N.S., 28th September, 1891.

The Commissioner of Inland Revenue,
Ottawa.

SIR,—I have the honour to submit my report on the samples submitted to me under the Adulteration Act during the year ending the 30th June, 1891.

Of the 132 samples examined, 88 were found genuine and 44 adulterated, as follows:—

—	Genuine.	Adulterated.	Total.
Mustard	5	25	30
Sugar	24	0	24
Molasses and syrup	24	0	24
Coffee	5	19	24
Liquors	30	0	30
	88	44	132

Mustard.

Only five, or 20 per cent, of these came within the limit allowed. In the remainder mustard was present in various quantities down to 15 per cent; two contained calcium sulphate and one exhausted cake. Flour of different kinds formed the chief addition, assisted by turmeric and cayenne.

Sugars.

The different grade of refined were all of good quality, especially the granulated. The label on sample 10616, reading Porto Rico, is probably an error for Demerara.

Molasses and Syrup.

No adulteration detected though some variation in quality found.

Coffee.

Twenty per cent were free from adulteration. Of the remainder, chicory was estimated to be present in quantities varying from 10 to 35 per cent, the average being 21 per cent. In fifteen samples roasted grain was found. The result may be shown as follows:—

Genuine	20·8	per cent.
Adulteration with chicory	16·7	do
do chicory and roasted grain	62·5	do

Liquors.

No adulteration detected.

I have the honour to be, Sir,
Your obedient servant,
MAYNARD BOWMAN.

2.—DISTRICT OF NEW BRUNSWICK.

CHEMICAL LABORATORY, 74 GERMAIN ST.,
ST. JOHN, N.B., 27th November, 1891.

The Commissioner of Inland Revenue,
Ottawa.

SIR,—I have the honour to submit to you my report on samples of food and liquors received for analysis during the year ending 30th June, 1891.

The following samples were examined, viz.:—

Sugar	18
Syrup	8
Molasses	10
Whiskey	14
Rum	1
Gin	1

None of these samples were classed as adulterated, and with the exception of a rather low alcohol strength in some of the liquors nothing objectionable was found.

I have the honour to be, Sir,
Your obedient servant,
W. F. BEST,
Public Analyst.

3.—DISTRICT OF QUEBEC.

OFFICE OF THE PUBLIC ANALYST,
QUEBEC, 31st July, 1891.

The Commissioner of Inland Revenue,
Ottawa.

SIR,—I beg to transmit my report for the fiscal year ended 30th June, 1891.

Samples.	Pure.	Adulterated	Doubtful.	Total.
Pepper	17	6	....	23
Sugar	18	....	....	18
Syrup	6	....	2	8
Molasses	10	....	....	10
Coffee	10	8	....	18
Whiskey	8	....	1	9
Rye whiskey	7	....	....	7
Brandy	2	....	....	2
Rum	3	....	....	3
Gin	1	....	....	1
Scotch whiskey	1	....	....	1
	83	14	3	100

Liquors.

Among the samples analysed there are some classified as pure or good, but which are a little too much diluted.

I have the honour to be, Sir,
Your obedient servant,
M. FISET,
Public Analyst

4.—DISTRICT OF MONTREAL.

OFFICE OF THE PUBLIC ANALYST,
MONTREAL, 1st August, 1891.

The Commissioner of Inland Revenue,
Ottawa.

SIR,—I have the honour to submit to you my annual report for the year ending 1st July, 1891.

During this period I have analysed and reported upon 132 samples of food, drink and drugs, and of these I have found 62 genuine, 42 adulterated and 28 doubtful, as detailed in the following table:—

Nature.	Genuine.	Adulterated	Doubtful.	Total.
Peppers	6	22	2	30
Sugars	17	0	6	23
Molasses and syrup	15	2	8	25
Sweet spirit of nitre	2	7	....	9
Prussic acid	1	6	2	9
Coffees	1	5	....	6
Spirituous liquors	20	....	10	30
	62	42	28	132

With the exception of the peppers and the coffee, the above show a better average of genuine samples than usual.

The sugars very good, some very pure, but some of the prepared syrups are adulterated with dextrine, which gives a higher polarizing value than pure syrup.

The drugs show an unexpected irregularity in quality, and in some cases great deterioration. The two articles examined are, however, of a perishable nature, and some may have been long imported or kept in stock too long; the result, however, shows the necessity on the part of vendors of constant vigilance in testing the quality of their stock of drugs and especially those of a potent and poisonous character.

The inquiry on this class of goods might be extended to the advantage of the public.

The liquors do not show the amount of adulteration popularly apprehended by the public. The articles suggested in the schedule have not been found, with the exception of fusil oil, which is incident to the production of liquors and high wines from corn and raw grains, and which it is the duty of the distiller to remove as far as possible.

The retailer has no inducement to add this substance as an adulterant; and the Government has given every inducement to the distiller to remove this noxious product by allowing a drawback for all returned to the Revenue Department.

From my general experience, the potable spirits sold in Canada are in this respect better purified than those offered to the public in the large cities of Great Britain or of the United States.

If these were sold by druggists for medicinal purposes, I should claim the strength and purity laid down in the British Pharmacopœa, but in the absence of a legal standard for potable spirits I am not disposed to press the view. I consider some of these liquors are too strong in alcohol for the welfare of the consumer, and whether sold in a weaker state either by the distiller or the retailer I should regard this as a public benefit.

I have the honour to be, Sir,
Your obedient servant,
JOHN BAKER EDWARDS,
Official Analyst, Montreal.

5.—DISTRICT OF KINGSTON.

OTTAWA, 18th August, 1890.

The Commissioner of Inland Revenue,
Ottawa.

SIR,—I have the honour to report on the 54 samples of milk collected since 1st July, 1890, and submitted to me for analysis. Fifteen samples collected at Hull, Que., arrived here curdled, and unfit for proper examination.

The analysis was nevertheless made, and the results tabulated below without further comment.

Of the remaining samples 20 were found genuine, 2 fair, 7 under average, or probably watered, 8 skimmed and 2 watered.

For results of analysis, *see* table.

RESULTS OF ANALYSIS OF MILK.

SAMPLES FROM HULL, QUE.

Number.	Specific Gravity at 60 F.	Water.	Total Solids.	Fat.	Solid not Fat.	Remarks.
		per cent.	per cent.	per cent.	per cent.	
9680	....	85·33	14·67	5·62	9·07	Curdled before analysis.
9681	....	87·01	12·99	3·92	9·07	do
9682	....	87·11	12·89	3·79	9·10	do
9683	....	85·69	14·31	5·13	9·18	do
9684	....	85·77	14·23	5·47	8·76	do
9685	....	86·66	13·34	4·41	8·93	do
9686	....	86·90	13·10	3·02	10·08	do
9687	....	91·40	8·60	1·60	7·00	do
9688	....	88·45	11·55	2·85	8·70	do
9689	....	86·16	13·84	4·42	9·42	do
9690	....	86·04	13·96	4·75	9·21	do
9691	1·007	86·73	13·27	4·05	9·22	Not in good condition for analysis.
9692	1·043	86·21	13·79	5·01	8·78	do do
9693	....	87·52	12·48	3·41	9·07	Curdled.
9694	....	85·55	14·45	5·23	9·22	do

SAMPLES FROM ALEXANDRIA.

9695	1·0319	87·34	12·66	3·63	9·03	Genuine.
9696	1·0325	87·17	12·83	3·74	9·09	do
9697	1·0339	85·70	14·30	4·63	9·67	do
9698	1·0349	89·06	10·94	1·43	9·51	Skimmed.
9699	1·0340	89·98	10·02	0·98	9·04	do
9700	1·0298	79·85	20·15	8·91	11·24	Partly cream.
10101	1·0316	87·98	12·02	3·15	8·87	Under average; probably watered.
10102	1·0333	87·76	12·24	2·83	9·41	Partly skimmed.
10103	1·0322	87·41	12·59	3·33	9·26	Under average.
10104	1·0340	87·72	12·28	2·98	9·30	Partly skimmed.
10105	1·0331	87·39	12·61	3·36	9·25	Under average.
10106	1·0319	87·05	12·95	3·75	9·20	Genuine.

SAMPLES FROM CORNWALL.

9201	1·0308	87·53	12·47	3·84	8·63	Fair.
9202	1·0322	86·87	13·13	3·95	9·18	Genuine.
9203	1·0294	86·04	13·96	5·40	8·56	Rich milk.
9204	1·0298	87·39	12·61	4·21	8·40	Genuine.
9205	1·0304	87·25	12·75	4·07	8·68	do
9206	1·0314	87·01	12·99	4·80	8·19	do
9207	1·0295	87·33	12·67	4·24	8·43	do
9208	1·0305	85·59	14·41	5·51	8·90	Rich milk.
9209	1·0305	86·70	13·30	4·58	8·72	Genuine.

RESULTS OF ANALYSIS OF MILK—*Concluded.*

SAMPLES FROM PRESCOTT.

Number.	Specific Gravity at 60 F.	Water.	Total Solids.	Fat.	Solid not Fat.	Remarks.
		per cent.	per cent.	per cent.	per cent.	
9210	1·0315	87·06	12·94	4·20	8·94	Genuine.
9211	1·0305	88·46	11·54	3·07	8·47	Watered.
9212	1·0350	87·26	12·74	2·97	9·77	Partly skimmed.
9213	1·0331	87·80	12·20	3·08	9·12	do
9214	1·0324	88·73	11·27	2·51	8·76	do
9215	1·0324	86·65	13·35	4·13	9·22	Genuine.
9216	1·0285	88·27	11·73	3·64	8·09	Very probably watered.

SAMPLES FROM CARDINAL.

Number.	Specific Gravity at 60 F.	Water.	Total Solids.	Fat.	Solid not Fat.	Remarks.
9217	1·0302	87·72	12·24	3·89	8·35	Fair.
9218	1·0295	88·68	11·32	3·00	8·32	Watered.

SAMPLES FROM MORRISBURG.

Number.	Specific Gravity at 60 F.	Water.	Total Solids.	Fat.	Solid not Fat.	Remarks.
9219	1·0309	88·08	11·92	3·41	8·51	Under average.
9220	1·0311	87·18	12·82	4·02	8·80	Genuine.
9221	1·0326	87·18	12·82	3·60	9·22	do
9222	1·0310	87·90	12·10	3·34	8·76	Under average.
9223	1·0316	87·86	12·14	3·44	8·70	do
9224	1·0333	85·91	14·09	4·39	9·70	Genuine.
9225	1·0325	85·94	14·06	4·53	9·53	do
9226	1·0336	87·80	12·20	2·83	9·37	Partly skimmed.
9227	1·0324	86·59	13·41	4·37	9·04	Genuine.

This table shows that whilst the Cornwall milk supply is very good, that of other localities is to be complained of. In fact skimming and watering are practised on a great scale in Alexandria, Prescott, Cardinal and Morrisburg. In sight of such a state of things, the best remedy that suggests itself would be to post up the names of fraudulent vendors, or at least to publish them in the local papers, as is practised in other countries. This, I believe, would be equivalent to a pretty heavy fine and the result better.

It is true, however, that this means is indirectly employed in the publication of the chief and other analysts bulletins and reports, but these are ignored by the great majority, and the milkmen continue their frauds.

I may be allowed, in order to impress once more upon the public the necessity of good milk supply, to add a few remarks from a medical point of view. If the consumer understood well the ill effects of watered and otherwise bad milk upon more particularly his children, he would perhaps also do his utmost towards uprooting the evil by reporting to authorities such vendors that impose upon him.

The milk being an article of first necessity for all ages, since it is an ailmentary drink, a food and also a medicament, moreover this living fluid, the only appropriated to the digestive powers of the new born and infants, being sufficient to their nourishment during the first period of their existance, the Government and boards of health should by a common consent establish severe rules, in such a manner that the milk should be always delivered in a perfect state of purity and subject to certain conditions of temperature, &c., as most important, are the changes induced in it by bacteria.

More important than all else in the prevention of diarrhœal diseases is it that the rich and poor in city and in country should be supplied with pure and wholesome milk, and that they should be taught how to keep it so in their homes.

Besides the care of cows which should not be fed with garbage, brewery slops, &c., the neatness and good ventilation of the stables should be ensured and the most scrupulous cleanliness of the teats, udders and milker's hands before milking; the milk should be placed immediately in tightly covered vessels, and be disturbed as little as possible by pouring from one vessel to another.

Until transported it should be in refrigerator cans, and the milk should be inspected on its arrival in the city, and its temperature taken.

No milk should be admitted which registers over 60° F.

The city delivery of milk also should be in carts in which the cans are kept upon ice during the summer months. The sale of milk whether from waggons or from shops should be allowed only by dealers licensed by boards of health, and the dealers should be compelled to keep the milk at the proper temperature, about 50° F.

Systematic milk inspection should be kept up and licenses revoked for violation of rules.

None of the precaution taken to secure against the dilution and adulteration of milk should be neglected.

A good many philantrophists and medical men have already written on the great mortality of children during the summer months, and all those who have dealt with this most serious and important question, have all come to the same conclusion that an impure milk, badly kept, poor, watery and otherwise adulterated is one of the principal causes, not to say the only one. This is the reason why I made it a duty to humbly make the above suggestions, convinced as I am, that if they were followed and put into practice, a great number of the little beings so dear to their parents would be saved, and in the meantime a great service done to society.

I have the honour to be, Sir,
Your obedient servant,
F. X. VALADE, M.D.,
Public Analyst.

OFFICE OF THE PUBLIC ANALYST,
OTTAWA, December 2, 1890.

The Commissioner of Inland Revenue,
Ottawa.

SIR,—I have the honour to report upon eighteen samples of refined and raw sugars, and upon eighteen samples of syrups and molasses, received for analysis from the Ottawa collector since 1st October last. The determinations required by the chief analyst—namely, moisture, glucose and cane sugar—are given in the following tables:—

REFINED SUGAR.

Numbers.	Moisture.	Glucose.	Cane Sugar.
	p. c.	p. c.	p. c.
9766	0·01	0·2	99·2
9768	0·04	0·1	98·9
9770	Trace.	Trace.	99·1
9772	0·06	do	99·0
9774	0·03	do	99·4
9777	0·06	do	99·3
9779	Trace.	do	99·5
9781	0·12	do	99·0
Mean composition........	0·04	Trace.	99·2
9775	0·04	Trace.	97·3
9778	0·46	2 3	94·3

BROWN SUGARS.

Numbers.	Moisture.	Glucose.	Cane Sugar.	Ash and Matter not Sugar.
	p. c.	p. c.	p. c.	p. c.
9765	3·75	6·7	85·9	3·65
9767	3·14	8·9	83·8	4·16
9769	3·74	6·9	87·5	1·86
9771	3·53	8·7	84·0	3·77
9773	3·75	9·4	84·2	2·65
9776	3·07	8·6	84·1	4·23
9780	3·60	8·5	83·7	4·2
9782	4·04	7·2	83·2	5·56
Mean composition...	3·58	8·11	84·55	3·76

SYRUPS.

Numbers.	Description.	Moisture.	Glucose.	Cane Sugar.	Ash and Matter not Sugar.
		p. c.	p. c.	p. c.	p. c.
9784	Golden syrup...	24·0	30·0	32·3	13·7
9785	New York sugar syrup........	25·5	31·7	37·1	5·8
9790	Syrup.	25·65	21·1	37·0	16·25
9792	Golden syrup....	24·5	29·9	36·7	8·4
9793	Syrup.....	25·45	26·1	32·6	12·25
9798	do	22·05	25·4	42·6	9·95
9800	New York syrup..............	22·58	29·6	35·4	12·42
Mean composition.........	....	24·25	27·7	36·7	12·35

MOLASSES.

Numbers.	Moisture.	Glucose.	Cane Sugar.	Other Matter.
	p. c.	p. c.	p. c.	p. c.
9783	29·5	15·3	45·1	10·1
9786	29·75	18·1	42·5	9·65
9787	27·3	16·0	47·4	9·3
9788	28·7	15·2	45·5	10·6
9789	30·0	11·55	50·55	7·9
9791	27·45	18·8	43·5	10·25
9794	28·9	14·2	47·9	9·00
9795	28·6	13·1	49·65	8·65
9796	30·2	13·1	49·8	6·9
9797	29·55	15·1	45·8	9·55
9799	27·8	16·7	46·1	9·4
Mean composition....	28·89	15·2	46·7	9·21

A great part of the above are the means of duplicate determination by the following method. The percentage of water was obtained by drying a portion of a convenient solution of the substance in asbestos at 100 per cent, as in the case of milk and the estimations of glucose and saccharose by Fehling's copper solution.

It will be seen that in almost every case refined sugar may be considered as pure saccharose, the slight deficiency being perhaps accounted for in the uncertainty of the end reaction in the copper process the approximation being with the 10cc Fehling, one tenth of 1cc of a half per cent sugar solution or about one per cent in the result.

Generally these sugars contain but faint traces of glucose, are larger grained (No. 9778) however, of a bright gold colour, gave an estimation a percentage of 2·3 of glucose whilst sucrose was found to be only 94·3 per cent.

This peculiar sample revealed also the unusual fact of being superficially coloured, the colour being almost completely washed out by proper treatment with water.

Its crystals adhere to one another as if they were coated with a gummy substance. It also possesses a high sweetening power and has a pronounced taste of molasses.

I am in doubt whether I should return this sample adulterated or not, it is perhaps an imitation of the Demarara sugar of the West Indies.

No experiments were made to ascertain the nature of that colouring matter.

All the samples of brown sugar analysed contained from 6·7 per cent to 9·4 per cent of glucose, a quantity which were it not for the cheapness of the article would lead to suspect the adulteration with cane sugar at any rate, although Allan (commercial organic analysis Vol 1) says that an addition of less than 20 per cent would not pay for the trouble yet one is struck by the idea, that in a beet-root raw sugar which nomially contains only a very small amount of grape sugar admixture of 10 per cent commercial glucose would in my opinion, be quite remunerative, wholesale prices varying by small fractions of a cent per pound.

Of course this is practical only in wholesale warehouses and in those localities where starch sugar is manufactured.

The fact must not be overlooked that in the United States about 10 pounds of corn sugar commercial glucose per head is manufactured and that *none* can be obtained when asked for the total quantity being used by confectioners; sugar refineries and others for the purpose of adulteration (see bulletin No. 25 United States Department of Agriculture.)

This practice may as well spread in this country if not checked in time.

The composition of syrups and molasses was found to be in the average, many samples left a considerable sediment of sugar crystals and dirt, all of which including the raw sugars examined under the microscope were found to contain vegetable debris, sporules of fungi, &c., no insects or sugar mites were however discovered.

I may, in closing this short study refer the reader to an excellent article on this subject in Hassels Food adulteration page 240 S. Seg., and advise the people to make exclusive use of refined sugar which is totally free of organic impurities.

I have the honour to be, Sir,
Your obedient servant,
F. X. VALADE, M.D.,
Public Analyst.

OFFICE OF THE PUBLIC ANALYST,
OTTAWA, 10th March, 1891.

The Commissioner of Inland Revenue.
Ottawa.

SIR,—Since 1st January, 1891, 18 samples of black and green tea were sent to me for analysis, upon which I have the honour to submit for your information the present report.

The usual determination as shown in the annexed table were made for the most part in duplicate, care being taken to carry the test in a uniform manner on all the samples, so that the results obtained may afford the means of comparing them.

These results with perhaps the exception of those of number 10212, in which tannin is rather low, are all within the average of unadulterated tea.

Some samples possess partly, a brilliant lustre as if coated with black lead, but inasmuch as colouring, or facing of genuine tea, is by many, not considered an adulteration or injurious to health, no particular examination was made in that direction.

Botanically examined, no sample revealed the presence of foreign leaves, but not beyond suspicion, as most all were very much broken tea, thus making this part of the work very difficult. In some cases the tea fragments could only be identified with great pains.

No foreign astringents, such as Catechu, &c., were detected, although turbidness of the infusion, after standing some time, occurred in some cases, this fact being according to J. P. Batterstall, indicative of the addition of Catechu.

A few slides of "Skeleton Ash" of leaves were also prepared according to A. W. Blyth for examination under the microscope as a means of detaching foreign leaves, but did not prove in my hands as successful as desired, tea itself being in this way difficult of identification.

Finally I may add that a proper judgment of tea may only be formed from a complete chemical analysis of the leaves supplemented by all available chemical and physical means of detecting adulteration, facing, astringency, foreign and spent leaves, &c., were the analyst remunerated sufficiently for such researches; but a sound opinion may be formed from the determination of the principal constituents that furnish more constant results such as ash, soluble and insoluble, tannin and theine, where only moderate fees are granted for the purpose.

In this series it will be remarked that the percentage of ash in different forms and of theine are very constant and it is principally on these data that I have based my opinion.

Results of Analysis of eighteen Samples of Tea.

Serial Number.	Moisture.	Total Ash.	Soluble Ash.	Insoluable Ash.	Total Astringency.	Tannin.	Extract.	Theine.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
10201	7·09	5·77	3·52	2·25	11·7	8·4	40·0	2·9
10202	3·93	6·00	3·67	2·33	14·3	9·3	40·2	3·1
10203	3·80	6·40	3·50	2·90	14·4	9·8	40·5	2·1
10204	7·89	5·85	3·48	2·37	11·6	9·5	31·2	3·1
10205	7·29	5·90	4·06	1·84	10·9	8·1	33·8	3·7
10206	5·26	5·53	3·49	2·04	17·7	13·5	41·4	4·0
10207	3·83	5·87	3·70	2·17	18·6	12·8	43·2	3·5
10208	3·96	6·61	3·48	3·13	14·9	9·9	37·8	3·2
10209	4·46	5·70	3·93	1·77	17·0	11·6	41·8	3·3
10210	4·69	5·32	3·58	1·74	18·2	13·3	40·6	3·7
10211	3·63	6·20	3·73	2·47	14·9	9·8	37·4	2·8
10212	6·89	5·40	3·57	1·83	8·6	5·3	32·8	2·3
10213	4·10	5·56	3·33	2·23	11·2	7·1	35·2	2·5
10214	5·73	6·20	3·57	2·63	12·6	8·0	36·6	2·9
10215	3·53	5·53	3·83	1·70	15·6	11·1	37·4	3·1
10216	7·16	5·74	3·02	2·72	10·7	7·0	31·5	2·6
10217	5·40	5·85	3·15	2·70	13·7	9·8	34·4	3·0
10218	3·73	5·70	3·42	2·27	13·6	9·7	37·9	2·9
Mean....	5·13	5·85	3·57	2·28	13·9	9·7	37·4	2·9

Note.—Total astringency and tannin are calculated and reported as oxalic acid.

I have the honour to be, Sir,
Your obedient servant,
F. X. VALADE, M.D.,
Public Analyst.

OFFICE OF THE PUBLIC ANALYST,
OTTAWA, 15th June, 1891.

The Commissioner of Inland Revenue,
Ottawa.

SIR,—I send you herewith my certificates of analysis of 23 samples of various alcoholic liquors, and have the honour to state that, apart from dilution and colouration, nothing injurious was discovered.

The presence of fusil oil was suspected, particularly in No. 10249, and in most of the Scotch and Irish whiskeys, but could not be detected with certainty.

No methyl derivatives were found.

Traces of metallic impureties—tannin and sulphates—were found in mostly all the samples, and No. 10252, termed "ancient whiskey," in addition to be so contaminated, was ascertained to be flavoured with cinnamon or cassia and sugar.

Caramel was found in rye whiskeys and rums.

Nos. 10251 and 10254 probably contained cayenne.

In forming my opinion I have principally been guided as before by the limits fixed by section 6 of the British Adulteration Act of 1879. No such regulations having yet been decided upon by the department.

I am of the opinion, however, that the English standards are too low for real good brandies, whiskeys and rums, which should not, according to authorities, contain less than 50 per cent absolute alcohol by measure, are thus allowed to be diluted with about one-fifth of their volume of water. The same is true for gin, the strength of which should be 20° U. P., whilst the limit is fixed at 35° U.P.

The annexed table contains my results in detail.

I have the honour to be, Sir,
Your obedient servant,
F. X. VALADE, M.D.,
Public Analyst.

ANALYSIS of Alcoholic Liquors.

No.	Description.	Locality.	Specific Gravity at 15·5° C.	Alcohol by Weight.	Alcohol by Volume	Proof Spirits.	Solids Ingrams.	Ash Grams.	Remarks.
				p. cent.	p. cent.	p. cent.	per litre.	per litre.	
10249	Irish whiskey.......	Trenton........	0·9352	42·28	49·81	87·29	1·23	0·09	Fusel oil, doubtful; traces of tannin; burning residue and pungent smell.
10250	Rum	do	0·9438	38·44	45·71	80·11	5·83	0·06	Caramel; traces of metals; tannin; pungent fumes.
10251	Malt whiskey........	do	0·9612	29·93	36·24	63·52	11·42	0·03	Sugar; traces of metals; cayenne, doubtful.
10252	Ancient whiskey.....	do	0·9452	38·08	45·35	79·47	6·08	0·07	Sugar and cinnamon; traces of metals; tannin and sulphates.
10253	Rye whiskey.........	Kingston.......	0·9550	31·92	38·40	67·30	1·62	0·04	Caramel; traces of metals and tannin; pungent fumes.
10254	Malt do	do	0·9403	39·65	46·96	82·31	3·11	0·03	Sugar; traces of metals; cayenne, doubtful.
10255	Gin	do	0·9459	36·75	43·81	76·77	0·08	0·03	Traces of metals and sulphates.
10256	Brandy..............	do	0·9578	30·03	36·25	63·52	1·72	0·04	Traces of tannin, metals and sulphates; pungent fumes.
10257	Rye whiskey.........	do	0·9532	32·80	39·40	69·04	1·31	0·07	Caramel; traces of metals and tannin do
10258	Rum.......... ...	Brockville	0·9321	44·69	52·68	92·31	8·73	0·07	do do do
10259	Scotch whiskey..	do	0·9436	37·93	45·10	79·04	1·12	0·08	Traces of metals and tannin and sulphates.
10260	Irish do	do	0·9347	42·51	50·06	87·73	1·00	0·16	do do
10261	Rye do	do	0·9623	27·41	33·23	58·23	1·54	0·09	Caramel do pungent smell.
10262	do do	do	0·9614	27·98	33·89	59·40	1·35	0·08	Traces of metals do do
10263	Brandy	Ottawa........	0·9406	40·46	47·94	84·02	5·35	0·04	Sugar; traces of metals and tannin do
10264	Gin	do	0·9363	41·65	49·12	86·09	0·08	0·04	Traces of metals and sulphates.
10265	Irish whiskey.	do	0·9550	31·80	38·25	67·05	0·70	0·13	do do and tannin; pungent smell.
10266	Rye do	do	0·9677	23·52	28·68	48·66	2·43	0·07	Caramel; traces of metals do do
10267	Scotch do	do	0·9364	41·83	49·34	86·47	0·88	0·04	Traces of metals do do
10268	Rye do	do	0·9469	36·47	43·51	76·23	2·52	0·08	Caramel; traces of metals do do
10269	Sheriff's Islay whiskey	do	0·9372	41·38	48·85	85·62	1·97	0·10	Traces of metals do and sulphates do
10270	Rye whiskey..........	do	0·9602	28·55	34·54	60·53	1·31	0·04	Caramel; traces of metals do do
10271	Old rye whiskey	do	0·9515	33·97	40·71	71·36	3·39	0·06	do do do sulphates do

I have the honour to be, Sir,
Your obedient servant,
F. X. VALADE, M.D.,
Public Analyst.

6.—DISTRICT OF TORONTO.

SCHOOL OF PRACTICAL SCIENCE,
TORONTO, 15th September, 1891.

The Commissioner of Inland Revenue,
Ottawa.

SIR,—I beg to submit my report for the year ending 30th June, 1891. During the year I have received 198 samples; two of these (milk) were broken in transit, leaving 196 samples, which I have examined, viz.:—

Articles.	Genuine.	Adulterated.	Doubtful.	Total.
Milk	74	24	54	142
Coffee	7	17	....	24
Spirituous liquors	30	....	....	30

With regard to the milks, my results are contained in a bulletin already published by the department, and need not be repeated in this place.

With regard to the coffees, 7 were reported genuine and 17 adulterated. The adulteration consisted of chicory and farinaceous matter, either together or separately.

The farinaceous matter was either pease or some form of roasted cereal.

I enclose a tabular statement of my results.

In these analysis the caffeine was determined by shaking the aqueom infusion with chloroform, after precipitation with basic lead acetate, and removal of the excess of lead with sulphurous acid.

The specific gravity of the 10 per cent extract was made as follows:—Ten grammes of dry coffee ground to pass through a 400 mesh sieve was weighed into a counter poised flash, and 100 gramme of water added. The flash was connected to an inverted condenser heated on a sheet of asbestos over a bunsen-burner, until it began to boil, after which the boiling was continued an hour. After an hours boiling the apparatus was allowed to cool for 15 minutes, then detatched from the condenser, placed on a balance, and water added till the weight was the same as before boiling. The contents were then filtered and the specific gravity taken at 15·5 per cent.

Spirits.

I enclose a tabular statement of the results of the examination of the samples of spirits. From this table it appears that two samples of rum examined contained 47·60 and 57·81 respectively of absolute alcohol by weight.

Two samples of gin contained 39·00 and 36·46 respectively.

Eighteen samples of whiskey had an average alcoholic strength of 33·24 per cent. Of these five were labelled Scotch or Irish, and averaged 39·15 per cent. The other thirteen averaged 30·20 per cent.

None of the Canadian samples exceeded 36 per cent. None of the Scotch or Irish samples fell below 37 per cent of alcohol.

Two samples of brandies contained 35·56 and 41·11 per cent respectively.

Two samples of highwines contained 75·11 and 75·19.

Two samples of port contained 8·97 and 12·13, and one sample of sherry contained 15·25 per cent alcohol.

One sample of ginger wine (labelled Scotch whiskey) contained 12·15 per cent absolute alcohol.

I have the honour to be, Sir,
Your obedient servant,
W. HODGSON ELLIS,
Public Analyst.

RESULTS of Analysis of Milk sold as Whole Milk.

Date of Collection.	No. of Sample.	Place of Collection.	Analysis.				Remarks.
			Water.	Butter Fat.	Solids not Fat.	Total Solids.	
1890.							
Aug. 21..	9701	Peterborough	86·95	3·26	9·79	13·05	
do 21..	9702	do	86·87	2·86	10·27	13·13	Below average in butter fat.
do 21..	9703	do	87·49	2·54	9·97	12·51	do do
do 21..	9704	do	85·97	4·79	9·24	14·03	
do 21..	9705	do	86·87	2·88	10·25	13·13	Poor in cream.
do 21..	9706	do	86·61	3·42	9·97	13·39	
do 23..	9707	Ashburnham	88·07	3·93	8·00	11·93	Poor in solids, but badly curdled (probably genuine.)
do 23..	9708	Lindsay	87·13	3·96	8·91	12·87	
do 23..	9709	do	87·01	4·40	8·59	12·99	
do 23..	9710	do	86·93	3·50	9·57	13·07	
do 23..	9711	do	88·29	2·58	9·13	11·71	Poor in butter fat.
do 23..	9712	do	88·10	2·61	9·29	11·90	do
do 25..	9713	Beaverton	88·01	2·30	9·69	11·99	do
do 25..	9714	do	88·20	2.18	9·62	11·80	Very poor in butter fat.
do 25..	9715	do	88·72	1·49	9·79	11·28	Partly skimmed.
do 25..	9716	do	87·51	3·01	9·48	12·49	
do 25..	9717	do	87·45	3·63	8·92	12·55	
do 25..	9718	Orillia	87·00	4·10	8·90	13·00	
do 25..	9719	do	85·86	4·03	10·11	14·14	
do 25..	9720	do	86·40	6·65	6·95	13·60	Very rich in fat; below in other solids (probably mixed with cream.)
do 25..	9721	do	85·33	4·56	10·11	14·67	
do 25..	9722	do	86·07	4·43	9·50	13·93	
do 25..	9723	do	86·69	3·86	9·45	13·31	
do 25..	9724	do	87·63	3·57	8·80	12·37	
do 25 .	9725	do	84·55	4·74	10·71	15·45	
do 25..	9726	Barrie	87·45	2·84	9·71	12·55	Below average in butter fat.
do 25..	9727	do	86·34	4·40	9·26	13·66	
do 25..	9728	do	84·99	3·77	11·24	15·01	
do 25..	9729	do	85·43	4·06	10·51	14·57	
do 25..	9730	do	87·51	3·63	8·86	12·49	
do 25..	9731	do	88·38	3·72	7·90	11·62	Watered.
do 25..	9732	do	86·44	3·28	10·28	13·56	
do 27..	9733	Bradford	84·95	3·87	11·18	15·05	
do 27..	9734	do	87·34	3·12	9·54	12·66	
do 27..	9735	do	89·17	0·28	10·55	10·83	Skimmed.
do 27..	9736	do	89·77	1·95	8·28	10·23	Either skimmed or watered.
do 27..	9737	do	87·63	3·34	9·03	12·37	
do 27..	9738	do	85·57	4·13	10·30	14·43	
do 27..	9739	do	89·61	1·42	8·97	10·39	Skimmed.
do 28..	9740	Newmarket	88·77	2·26	8·97	11·23	Poor in cream, probably skimmed.
do 28..	9741	do	89·87	1·93	8·20	10·13	Skimmed.
do 28..	9742	do	85·44	4·60	9·96	14·56	
do 28..	9743	do	89·29	1·93	8·78	10·71	do
do 28..	9744	do	86·82	3·04	10·14	13·18	
do 28..	9745	do	89·75	1·73	8·52	10·25	do
do 28..	9746	do	84·64	7·32	8·04	15·36	Partly cream.
do 28..	9747	Aurora	89·30	1·54	9·16	10·70	Skimmed.
do 28..	9748	do	87·74	1·59	10·67	12·26	do
do 28..	9749	do	89·77	0·94	9·29	10·23	do
do 28..	9750	do	86·25	4·22	9·53	13·75	
do 28..	9751	do	87·80	4·19	8·01	12·20	Poor in solids not fat; milk badly curdled (probably genuine.)
do 28..	9752	do	87·92	3·88	8·20	12·08	Poor in solids not fat.
do 30..	9753	Toronto	87·67	3·17	3·16	12·33	
do 30..	9754	do	89·38	3·28	7·34	10·62	Watered.
do 30..	9755	do	87·63	2·40	9·97	12·37	Poor in fat.

RESULT of Analysis of Samples of Milk sold as Whole Milk.

Date of Collection	No. of Sample.	Place of Collection.	Analysis.				Remarks.
			Water.	Butter Fat.	Solids not Fat.	Total Solids.	
1890.							
Aug. 30..	9756	Toronto.... ...	89·08	3·08	7·84	10·92	Watered.
do 30..	9757	do	89·40	2·83	7·77	10·60	do
do 30..	9758	do	87·78	3·24	8·98	12·22	
do 30..	9759	do	88·31	3·20	8·49	11·69	
do 30..	9760	do	89·75	1·73	8·52	10·25	Skimmed.
do 30..	9761	do	87·65	2·60	9·75	12·35	Poor in cream.
do 30..	9762	do	89·17	2·25	8·58	10·83	do probably skimmed.
do 30..	9763	do	88·39	3·10	8·51	11·61	
do 30..	9764	do	87·48	3·11	9·41	12·52	
Nov. 10..	10401	St. Mary's	83·62	7·53	8·85	16·38	Exceptionally high fat.
do 10..	10402	do	86·78	3·57	9·65	13·22	
do 10..	10403	do	87·28	4·32	8·40	12·72	Solids not fat, below average.
do 10..	10404	Lucan......... .	88·78	3·99	7·23	11·22	Watered.
do 10..	10405	do	84·95	6·48	8·57	15·05	Very rich in butter fat.
do 11..	10406	Sarnia.........	86·95	4·12	8·93	13·05	
do 11..	10407	do	87·20	4·54	8·26	12·80	Solids not fat, below average.
do 11..	10408	do	87·45	4·03	8·52	12·55	
do 11..	10409	do	85·53	5·68	8·79	14·47	
do 11..	10410	do	86·62	5·24	8·14	13·38	
do 11..	10411	do	88·05	4·09	7·86	11·95	Watered.
do 11..	10412	do	86·06	4·97	8·97	13·94	
do 11..	10413	Petrolea.......	86·63	4·10	9·27	13·37	
do 11..	10414	do	86·74	4·39	8·87	13·26	
do 11..	10415	do	88·17	3·78	8·05	11.83	Solids not fat, below average.
do 11..	10416	do	87·09	4·17	8·74	12·91	
do 12..	10417	Dresden........	87·03	3·93	9·04	12·97	
do 12..	10418	do	88·07	3·55	8·38	11·93	do do
do 12..	10419	do	86·56	4·58	8·86	13·44	
do 13..	10420	Chatham........	88·47	4·57	6·69	11·53	Watered.
do 13..	10421	do	88·43	2·78	8·79	11·57	Butter fat, below average.
do 13..	10422	do	...	.....	......	......	Broken in transit.
do 13..	10423	do	88·33	2.88	8·79	11·67	Butter fat, below average.
do 13..	10424	do	87·48	4·11	8·41	12·52	Solids not fat, below average.
do 13..	10425	do	88·20	3·37	8·43	11·80	Solids and butter fat, below average.
do 13..	10426	do	87·77	4·08	8·15	12·23	do do
do 13..	10427	do	89·67	3·22	7·11	10·33	Watered.
do 13..	10428	Glenco..........	87·85	3·70	8·45	12·15	Solids not fat, below average.
do 13..	10429	do	91·04	1·69	7·27	8·96	Watered.
do 14 .	10430	St. Thomas.....	89·50	3·12	7·38	10·50	do
do 14..	10431	do	87·70	4·01	8·29	12·30	
do 14..	10432	do	87·88	3·98	8·14	12·12	Solids not fat, below average.
do 14..	10433	do	87·46	3·62	8·92	12·54	
do 14..	10434	do	88·31	3·19	8·50	11·69	Butter fat and solids, below average.
do 14..	10435	do	88·84	3·62	7·54	11·16	Watered.
do 14..	10436	do	87·21	4·12	8·64	12·79	
do 14..	10437	do	87·99	3·83	8·18	12·01	Solids not fat, below average.
do 14..	10438	do	88·33	3·90	7·77	11·67	Watered.
do 14..	10439	do	87·03	4·28	8·69	12·97	
do 14..	10440	do	88·21	3·26	8·53	11·79	Butter fat and solids, below average.
do 25..	10441	Guelph	87·14	3·86	9·00	12·86	
do 25..	10442	do	86·73	3·91	9·36	13·27	
do 25..	10443	do	87·60	3·50	8·90	12·40	
do 25..	10444	do	87·71	3·28	9·01	12·29	Butter fat, below average.
do 25..	10445	do	85·92	4·52	9·56	14·08	
do 25..	10446	do	88·55	3·03	8·42	11·45	Butter fat and solids, below average.
do 25..	10447	do	87·35	3·56	9·09	12·65	
do 25..	10448	d.	.....	.....	. ..	.... .	Broken in transit.

Results of Analysis of Samples of Milk sold as Whole Milk—*Continued.*

Date of Collection	No. of Sample.	Date of Collection.	Analysis.				Remarks.
			Water.	Butter Fat.	Solids Not Fat.	Total Solids.	
1890.							
Nov. 26..	10449	Palmerston.. ...	87·33	3·83	8·84	12·67	
do 26..	10450	do	87·30	3·74	8·96	12·70	
do 26..	10451	do	87·69	3·28	9·03	12·31	Butter fat, below average.
do 26..	10452	do	87·24	3·68	9·08	12·76	
do 27..	10453	Mount Forest...	84·95	5·30	9·75	15·05	
do 27..	10454	do ...	87·87	3·39	8·74	12·13	do do
do 27..	10455	do ...	85·72	5·38	8·90	14·28	
do 27..	10456	de ...	86·77	3·38	9·85	13·23	do do
do 27..	10457	Mount Forest...	87·24	3·42	9·34	12·76	Butter fat below average.
do 28..	10458	Orangeville.....	85·73	4·94	9·33	14·27	
do 28..	10459	do	86·94	3·88	9·18	13·06	
do 28..	10460	do	87·45	3·99	8·56	12·55	
do 28..	10461	do	85·83	7·66	6·51	14·17	Very high butter fat.
do 28..	10462	do	86·07	4·60	9·33	13·93	
do 28..	10463	do	84·94	5·68	9·38	15·06	
Dec. 2..	10464	Shelburne .	88·63	2·61	8·76	11·37	Butter fat and solids below average.
do 2..	10465	do	88·44	2 51	8·85	11·36	do do do
do 2..	10466	do	84·33	5·79	9·88	15·67	
do 2..	10467	do	88·43	0·78	10·79	11·57	Skimmed.
do 3..	10468	Owen Sound....	87·01	4·15	8.84	12·99	
do 3..	10469	do	86·34	4·36	9·30	13·66	
do 3..	10470	do	85·67	4·84	9·49	14·33	
do 3..	10471	do	86·51	3·98	9.51	13·49	
do 3..	10472	do	85·95	4·54	9·51	14·05	
do 3..	10473	do	84·72	5·85	9·43	15·28	
do 3..	10474	do	85·99	5 13	8·88	14·01	
do 3..	10475	do ...	86·72	4·05	9·23	13·28	
do 3..	10476	do	85·26	7·08	7·66	14·74	High fat.
do 3..	10477	do	86·68	4·43	8·89	13·32	
do 3..	10478	do	86·43	4·17	9·40	13·57	
do 5..	10479	Alliston...	87·93	2·41	9·66	12·07	Butter fat below average.
do 5..	10480	do	86·34	4·15	9·51	13·66	

RESULTS of Analysis of Samples of Coffee.

Date of Collection.	No. of Sample.	Place of Collection.	RESULT OF ANALYSIS.							Microscopical Examination.	Remarks.
			Moisture.	Ash.			Caffeine.	Sp. Gr. of 10% extracts at 15·5° c.	Sugar, per cent		
				Total.	Soluble.	Insoluble.					
1891.											
Jan. 8	9330	Montreal	3·00	5·21	4·05	1·00	1·12	1·01056		No foreign substance	Genuine.
do 8	9331	do	3·60	4·20	2·51	1·69	0·87	1·01819		Pease, flour and chicory	Adulterated with pease, flour and chicory.
do 8	9332	do	2·80	4·33	3·23	1·10	0·97	1·01291		Chicory	do do chicory.
do 8	9333	do	3·15	3·58	1·96	1·62	0·72	1·01450		Pease	do do pease.
do 8	9334	do	3·01	3·91	2·91	1·00	1·52	1·01127	1·25	do	do do pease.
do 8	9335	do	3·69	3·36	2·19	1·17	0·35	1·01689	1·25	Flour, peas and chicory	do do flour, pease and chicory.
do 14	9336	Arthabaska, P.Q.	3·27	4·88	3·41	1·47	1·25	1·01161	1·25	Chicory	do do a little chicory.
do 14	9337	do	3·86	3·65	2·62	1·03	0·51	1·01694	1·25	Chicory and peas	do do chicory and pease.
do 14	9338	do	4·92	3·78	2·65	1·13	0·66	1·01674	1·25	Chicory and flour	do do chicory and flour.
do 15	9339	Lévis, P.Q.	3·11	4.00	3·19	0·81	1·38	1.01073	1·25	No foreign substance	Genuine.
do 15	9340	do	2·72	4·30	3·53	0·76	1·25	1·01241	1·25	Chicory	Adulterated with chicory.
do 15	9341	do	2·77	4·03	3·22	0·81	1·45	1·01078	1·25	No foreign substance	Genuine.
do 15	9342	Quebec, P.Q	4·61	4·13	3·03	1·10	1·41	1·01237	1·25	Chicory	Adulterated with chicory.
do 15	9343	do	5·72	3·85	2·60	1·25	0·85	1·01540	1·25	Chicory and flour	do do chicory and flour.
do 15	9344	do	3·33	4·18	3·34	0·83	0·90	1·01828	1·25	Chicory	do do chicory.
do 16	9345	do	2·80	4·53	3·70	0·83	1·32	1·01022	1·25	No foreign substance	Genuine.
do 16	9346	do	3·13	4·81	3·53	1·28	1·05	1·01291	1·25	Chicory	Adulterated with chicory.
do 16	9347	do	2·95	4.25	3·61	0·64	1·25	1·01063	1·25	No foreign substance	Genuine.
do 21	9348	Berthier	5·67	4·37	3·41	0·96	1·36	1·01053	1·25	do do	do
do 21	9349	do	3·68	3·80	2·60	1·20	0·67	1·01530	1·25	Pease and chicory	Adulterated with pease and chicory.
do 21	9350	do	5·42	3·30	2·10	1·20	0·34	1·01604	1·25	Pease	do do pease.
do 22	9351	Three Rivers	3·99	4·03	3·10	0·93	1·02	1·01187	1·25	do	do do pease.
do 22	9352	do	4·33	3·65	2·47	1·18	0·62	1·01629	1·25	Chicory and pease	do do chicory and pease.
do 22	9353	do	3·18	4·23	3·42	0·81	1·16	1·01073	1·25	No foreign substance	Genuine.

RESULTS of Analysis of Alcoholic Liquors and Wines.

Date of Collection	Number of Sample.	Kind of Liquor.	Place of Collection.	Specific Gravity at 15·5° C.	Solids.	Absolute Alcohol by Weight.	Remarks.
1891.				p. cent.	p. cent.	p. cent.	
Apr. 9..	10219	Rum.............. ...	Toronto	·9397	....	47·60	
do 9..	10220	Rye whiskey	do	·9690	·18	22·08	
do 9..	10221	Geneva gin...........	do ..	·9405	·06	39·00	
do 9..	10222	Old malt whiskey	do	·9561	·11	31·00	
do 9..	10223	Scotch do	do	·9379	·02	41 00	
do 9..	10224	Irish do	do	·9390	·22	41·00	
do 10..	10225	Port wine............	do	1·0181	8·97	12·62	
do 10..	10226	Rye whiskey.........	do ...	·9549	·19	33·0	
do 10..	10227	Malt do	do	·9694	·08	21·62	
do 10..	10228	White wheat whiskey.	do	·9475	·09	36·00	
do 13..	10229	Rye whiskey........	Orangeville.	·9502	·16	33·76	
do 13..	10230	do	do ..	·9525	·11	33·29	
do 13..	10231	Brandy	do ..	·9448	·24	35·56	
do 13..	10232	Irish whiskey........	do ..	·9375	·08	37·99	
do 13..	10233	Ginger wine.........	do ..	1·0906	28·08	12·15	Labelled by inspector "Scotch whiskey."
do 13..	10234	Rye whiskey........ .	Shelburne ..	·9514	·40	32·17	
do 13..	10235	Malt do	do ..	·9514	·14	31·78	
do 13..	10236	Rye do	do ..	·9549	·10	29·48	
do 13..	10237	Sherry.	do ..	·9938	3·58	15·25	
do 13..	10238	Port wine........ . ..	do ..	1·0127	5·76	12·13	
do 14..	10239	Malt whiskey.........	Brampton ..	·9545	·44	30·53	
do 14..	10240	Geneva gin	do ..	·9440	·02	36·46	
do 14..	10241	Highwines	do ..	·8216	·07	75·11	
do 14..	10242	Rye whiskey.........	do ..	·9475	·10	34·89	
do 14..	10243	Malt do	Oshawa.....	·9510	·22	32·86	
do 14..	10244	Rum	do	·8770	·73	57·81	
do 14..	10245	Scotch wkiskey	do	·9379	·25	38·22	
do 16..	10246	Irish do	Port Hope..	·9386	·08	37·56	
do 16..	10247	Brandy..............	do ..	·8236	·06	41·11	
do 16..	10248	Highwines.	do ..	·8236	·06	75·19	

7.—DISTRICT OF LONDON.

Office of the Public Analyst,
London, 30th June, 1891.

The Commissioner of Inland Revenue,
Ottawa.

Sir,—I beg to submit my report on samples of liquors analysed by me during the past three months. I have analysed in all twenty three samples, viz.:—

Malt and rye whiskey	15	samples.
Gin	3	do
Rum	1	do
Brandies	4	do
Total	23	do

In none of these samples did I find any of the adulterants enumerated in "First Schedule" of the Adulteration Act, with the exception of traces of amyl-alcohol, so that any classification will be as to the percentage of alcohol.

Whiskey.

The specific gravity varied between .960 and .945, the lowest percentage of absolute alcohol by weight being 28·32 and the highest 37·60. I believe no standard has been established by the department, but they all fall short of the strength required by the United States Pharmacopœia which states that the sp. gr. shall be between .930 and .917 corresponding to a percentage between 44 and 50 of alcohol. The total solid of No. 10481 is .490 per cent, the limit stated in the United States Pharmacopœia being 250 per cent.

Gin.

No. 10485, which was labelled "Tom Gin," contained 34·41 per cent of alcohol, and a very high amount of solid residue—2,784 per cent. The other two samples contained 48·78 per cent, and 46.43 per cent of alcohol by weight.

Rum.

Only one sample analysed, and contained 61·00 per cent of alcohol.

Brandies.

The four samples varied as to percentage of alcohol by weight, between 37·00 and 51·73.

No. 10482 and 10494 contained no tannin, which, according to the United States Pharmacopœia, indicates artificial brandies. No. 10500 contains very high total solid, viz.:—1·517 per cent, and contains a large amount of tannin.

I have the honour to be, Sir,
Your obedient servant,
FRANKLIN T. HARRISON.
Public Analyst.

8.—DISTRICT OF MANITOBA.

St. John's College,
Winnipeg, 30th September, 1890.

The Commissioner of Inland Revenue,
Ottawa.

Sir,—I have the honour to submit my report for the last quarter. During the three months 30 samples of lard were examined. None of the samples were adulterated with water. Twenty contained both cotton seed oil, and tallow—one of these alone being sent to me as "Lard Compound." Of the remaining ten, nine appeared genuine, the tenth giving doubtful results. Some of the unadulterated samples were in a very rancid condition when received.

I have the honour to be, Sir,
Your obedient servant,
EDGAR B. KENRICK,
Public Analyst.

APPENDIX C—INSPECTION OF FOOD,

MUSTARD.

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis.						
					Moisture.	Fixed Oil.	Total Ash.	Soluble.	Sulphuric Inorganic	Calcium Sulphate.	Total Sulphur.
1890.					p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.
Aug. 12..	M. Bowman....	Halifax, N.S..	3522	9873	5·59	9·85	13·62	.. ..	1·93	8·19	......
do 12..	do	do ..	3496	9874	8·05	20·65	2·94	0·12	0·03	......	......
do 12..	do	do ..	3497	9875	10·29	7·57	3·40	0·30	.....	......	......
do 12..	do	do ..	3498	9876	7·77	25·97	3·28	0·07	.	....	.....
do 14..	do	do ..	3499	9877	6·46	30·72	3·39	0·70	0·01	....	.....
do 14..	do	do ..	3500	9878	8·22	20·69	3·02	0·09	0·03	......	......
do 14..	do	do ..	3501	9879	8·21	17·70	5·21	...	0·02	.....	......
do 14..	do	do ..	3502	9880	9·65	7·09	4·16	0·46	0·15	......	....
do 14.	do	do ..	3503	9881	10·25	7·07	3·45	0·30	.....	......	.....
do 14..	do	do ..	3504	9882	64·39	14·91	14·70	.....	0·25	......	......
do 15..	do	do ..	3505	9883	7·80	19·45	6·40	0·23	0·04	......	.....
do 15.	do	do ..	3506	9884	9·83	20·35	2·89	0·17	0·01	......	......
do 15..	do	do ..	3507	9885	9·91	20·09	2·83	0·13	0·03	......	......
do 15..	do	do ..	3508	9886	6·21	30·65	3·82	0·68	... ..	.....	......
do 16..	do	do ..	3509	9887	80·22	18·64	22·64	......	0·13	......	.. ..
do 16..	do	do ..	3510	9888	11·11	7·42	3·59	0·05	0·02	......	......
do 18..	do	do ..	3511	9889	9·63	20·91	2·65	0·19	0·03	......	......
do 18..	do	do ..	3512	9890	6·15	30·48	3·14	0·12	Trace	......	......
do 18..	do	do ..	3513	9891	8·79	8·01	4·28	0·04	0·03	......	......
do 18..	do	do ..	3523	9892	7·22	7·55	16·18	......	3·08	13·84	0·75
do 18..	do	do ..	3524	9893	6·34	14·08	8·50	......	0·37	1·56	2·20
do 18..	do	do ..	3516	9894	8·08	17·27	5·41	0·93	0·02	......	.....
do 20..	do	do ..	3517	9895	9·71	7·65	3·32	0·28	0·01	......	......
do 20..	do	do ..	3518	9896	8·99	11·00	4·33	0·17	0·02	......	......
do 20..	do	do ..	3519	9897	12·43	4·60	2·10	0·37	0·04	......	......
do 20..	do	do ..	3520	9898	9·28	20·56	2·88	0·14	0·03	......	......
do 11..	do	do ..	3491	9869	8·07	22·41	2·93	0·01	0·04	......	......
do 11..	do	do ..	3492	9870	9·29	7·32	3·52	0·04	0·01	......	......
do 11..	do	do .	3493	9871	9·33	21·12	2·92	0·21	0·05	......	......
do 11..	do	do ..	3494	9872	9·88	6·59	4·20	0·61	0·16	......	......

DRUGS, &c.—Tabulated Statement.

Vendor.	Residence.	Observations.
Black & Co.	Truro, N.S.	Adulteroted with starch and calcium sulphate.
R. J. Turner	do	Adulterated, containing 60 p. ct. mustard and 40 p. ct. foreign matter.
Judson & Hanson	do	do do 25 do 75 do
G. J. McLeod	do	Unadulterated, do 75 do 25 do
James Scott & Co.	Halifax	do do 90 do 10 do
M. H. Rugges & Co.	do	Adulterated, do 60 do 40 do
John Ead	do	do do 50 do 50 do
John Cronan	do	do do 25 do 75 do
Mary Carroll	do	do do 25 do 75 do
Davidson Bros	do	Adulterated ; excessive ash.
W. H. Stimpson	do	Adulterated ; probably containing exhausted cake.
R. T. Forristall	do	Adulterated, containing 60 p. ct. mustard and 40 p. ct. foreign matter.
W. C. Nisbet	do	do do 60 do 40 do
Brown & Webb	do	Unadulterated, containing 90 p. ct. mustard and 10 p. ct. foreign matter.
H. V. Wier	do	Adulterated ; excessive ash.
Wm. Muir & Son	do	Adulterated, containing 25 p. ct. mustard and 75 p. ct. foreign matter.
John Lynch & Son	do	do do 60 do 40 do
Jess. B. Smith	do	Unadulterated, do 90 do 10 do
W. H. Paysant	do	Adulterated, do 25 do 75 do
James E. Graham	do	Adulterated with starch and calcium sulphate.
Wood & Murphy	do	Adulterated with starch, calcium sulphate and sand.
E. C. Shaw	do	Adulterated, containing 50 p. ct. mustard and 50 p. ct. foreign matter.
Wm. Malcolm	Annapolis	do do 25 do 75 do
W. McCarnuck & Son	do	do do 35 do 65 do
Pickle & Mills	do	do do 15 do 85 do
Clarke & Co	do	do do 60 do 40 do
Barry D. Bent	Amherst	do do 65 do 35 do
Rufus Embric	do	do do 25 do 75 do
A. M. Freeman	do	do do 60 do 40 do
B. W. Rulston	do	do do 20 do 80 do

APPENDIX C.—ISPECTION OF FOOD,

SUGAR AND

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis.		
					Moisture.	Sucrose.	Glucose.
1891.							
Jan. 17	M. Bowman	Halifax, N.S	3545	10601	0·07	99·30	....
do 17	do	do	3546	10602	4·07	92·10	2·22
do 17	do	do	3547	10603	5·93	88·00	2·78
do 17	do	do	3548	10604	5·16	88·00	4·90
do 17	do	do	3549	10605	5·01	90·80	1·47
do 17	do	do	3550	10606	5·70	85·50	2·21
do 17	do	do	3551	10607	0·06	99·90	....
do 20	do	do	3552	10608	4·25	91 60	1·06
do 20	do	do	3553	10609	0·05	99·70	....
do 20	do	do	3554	10610	2·08	94·20	0·62
do 20	do	do	3555	10611	3·91	88·10	2·78
do 20	do	do	3556	10612	1·30	94·60	2 27
do 27	do	do	3557	10613	3·07	93·30	1·67
do 27	do	do	3558	10614	4·52	90·30	1·51
do 27	do	do	3559	10615	.....	99·9	....
do 27	do	do	3560	10616	0·38	98·40	....
do 27	do	do	3561	10621	4·55	86·30	3·85
do 27	do	do	3562	10622	0·01	99 60	....
do 27	do	do	3263	10623	3·35	91·40	1·47
do 27	do	do	3564	10624	0·10	99·40	....
do 27	do	do	3565	10629	2·68	92·10	1·57
do 27	do	do	3566	10630	2·82	90·90	1·47
do 27	do	do	3567	10631	0·07	99·50	....
do 27	do	do	3568	10632	2·57	89·10	3·84
do 23	do	do	3581	10617	16.34	33·68	35·97
do 23	do	do	3369	10618	22·88	37·45	26·14
do 23	do	do	3570	10619	25·00	36·21	24·39
do 23	do	do	3582	10620	16·70	34·44	36·36
do 24	do	do	3571	10625	24·30	34·25	27·10
do 24	do	do	3583	10626	17·10	33·55	37·03
do 24	do	do	3584	10627	38·86	35·92	18·51
do 24	do	do	3572	10628	25·66	39·38	21·83
do 24	do	do	3573	10633	25·30	41·85	21·73
do 24	do	do	3574	10634	28·74	42·12	16·39
do 24	do	do	3585	10635	40·20	2·36	56·33
do 24	do	do	3586	10636	42·26	14·70	41·66
do 24	do	do	3575	10637	28·36	45·13	15·62
do 24	do	do	3576	10638	25·26	40·43	21·74
do 24	do	do	3577	10639	27·44	45·42	16·28
do 24	do	do	3578	10640	30·80	30·69	20·32
do 24	do	do	3579	10641	27·34	48·50	13·66
do 24	do	do	3580	10642	27·94	49·42	14·04
do 24	do	do	3587	10643	16·90	34·73	36·31
do 24	do	do	3588	10644	17·22	34·91	35·71
do 24	do	do	3589	10645	17·66	33·93	35·96
do 24	do	do	3590	10646	44·24	14·29	37·03
do 24	do	do	3591	10647	45·50	41·43	8·06
do 24	do	do	3592	10648	50·70	25·18	27·10

DRUGS, &c.—Tabulated Statement—*Continued.*

SYRUP.

Vendor.	Residence.	Observations.
James Scott & Co	Halifax, N.S.	Sugar; genuine.
do	do	do
T. F. Courtney	do	do
Nesbet & Drake	do	do
W. E. Crow & Co	do	do
L. E. Brooks & Co	do	do
D. J. Leahy & Co	do	do
Anderson & Co.	do	do
R. E. McDonald	do	do
W. B. Spencer	do	do
R. F. Forristal	do	do
W. H. Pallister	do	do
G. J. McLeod	Truro, N.S.	do
D. Gunn	do	do
H. W. Ryan	do	do
W. H. Snook & Co	do	do
C. J. McKinnon	New Glasgow, N.S	do
Alexander Cameron	do	do
James McArthur	do	do
John Vane & Co	do	do
John Munroe	Pictou, N.S.	do
Hogg, Cragg & Co	do	do
D. Logan	do	do
D. Patterson	do	do
E. E. McNutt	Truro, N.S	Syrup; unadulterated.
do	do	Molasses do
McKay & Ross	do	Porto Rico syrup; unadulterated.
G. J. McLeod	do	Golden syrup do
Angus Chisholm	New Glasgow, N.S	St. Vincent molasses do
do	do	Golden syrup do
James E. Shaw	do	Lemon do do
Alexander Cameron	do	Porto Rico molasses do
J. A. Hacker & Co	Pictou, N.S.	Diamond W. do do
C. W. Ives	do	Porto Rico do do
Hogg, Cragg & Co	do	Lime fruit syrup do
J. R. MacDonald	do	Strawberry do do
H. W. Brown	Halifax, N.S.	Cientofigo molasses do
D. J. Leahy & Co	do	Porto Rico do do
F. Gastongay	do	St. Jago do do
R. H. Campbell	do	Cientofiego do do
Wm. Muir & Son	do	Diamond W. do do
Payzant & King	do	do Antigua do
H. V. Weir	do	Golden syrup do
Anderson & Co.	do	do do
E. J. Lordly	do	do do
Thos. Major	do	Lemon syrup do
R. Urquahart & Son	do	Raspberry syrup do
James Croskill & Son	do	Lime fruit do do

APPENDIX C.—INSPECTION OF FOOD,

COFFEE.

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis.			
					Moisture.	Sol. Ash.	Total Ash.	Specific Gravity 10 p. c. decoction.
1891					p. c.	p. c.	p. c.	p. c.
Mar. 24..	M. Bowman	Halifax, N.S.	3593	10649	3·46	2·82	4·38	1·0145
do 24.	do	do	3594	10650	3·20	2·89	4·16	1·0143
do 24..	do	do	3595	10651	3·23	3·14	5·69	1·0130
do 24..	do	do	3596	10652	3·78	2·49	3·63	1·0155
do 25..	do	do	3597	10653	3·47	2·66	4·29	1·0139
do 25..	do	do	3598	10654	2·92	2·92	4·10	1·0116
do 26..	do	do	3599	19655	3·55	2·47	4·11	1·0141
do 26..	do	do	3600	10656	3·86	2·40	3·86	1·0123
do 26..	do	do	3601	10657	3·82	2·20	3·79	1·0120
do 28..	do	do	3602	10658	3·71	2·51	4·10	1·0118
do 28..	do	do	3603	10659	3·35	3·22	4·68	1·0133
do 30..	do	do	3604	10660	4·60	2·58	4·25	1·0148
April 1..	do	do	3605	10661	3·81	3·72	4·51	1·0096
do 1..	do	do	3606	10662	4·51	3·48	4·53	1·0094
do 1..	do	do	3607	10663	3·51	3·04	5·28	1·0136
do 1..	do	do	3608	10664	3·40	3·09	5·25	1·0140
do 2..	do	do	3609	10665	2·35	3·13	4·31	1·0138
do 2..	do	do	3610	10666	3·56	3·27	4·58	1·0130
do 2..	do	do	3611	10667	3·88	....	4.20	1·0150
do 2..	do	do	3612	10668	3·33	3·12	4·93	1·0128
do 3..	do	do	3613	10669	3·11	3·27	4·07	1·0101
do 3..	do	do	3614	10670	3·67	2·71	4·52	1·0166
do 3..	do	do	3615	10671	2·96	3·31	4·21	1·0098
do 3..	do	do	6616	10672	2·93	3·35	4·38	1·0092

DRUGS, &c.—Tabulated Statement—*Continued.*

Vendor.	Residence,	Observations.
Alex. Forsyth	Dartmouth, N.S.	Adulterated with roasted grain and about 25 per cent chicory.
J. B. McLean	do	do do
T. Gentles	do	Adulterated with roasted grain and 20 per cent chicory.
J. R. Ormond	do	do do 30 do
J. A. Sproule	Halifax, N.S.	do do 20 do
W. E. Crowe & Co.	do	do with a small amount of grain and about 10 p. c. chicory.
Richard Oneill	do	do with roasted grain and about 25 per cent chicory.
W. McC. Boak	do	do do 15 do
H.W.Wentzell&Co	do	do do 15 do
Henry Beaker	do	do with a large amount of roasted grain and 10 p. c. chicory.
John Hogan	do	do with about 20 per cent chicory.
Wm. Forsyth	do	do with roasted grain and about 25 per cent chicory.
J. Lynch & Son	Windsor, N.S.	Unadulterated.
J. E. Graham	do	do
Wood & Murphy	do	Adulterated with roasted grain and about 20 per cent chicory.
Rooney Bros	do	do with a small quantity of roasted grain and about 20 per cent chicory.
Samuel Boak	Kentville, N.S.	do with about 20 per cent chicory.
J. S. Rockwell	do	do do
D. H. Coffin	do	do with roasted grain and about 30 per cent chicory.
T. R. Dodge & Co.	do	do do 15 do
G. D. Campbell	Weymouth	Unadulterated; contains a very small quantity of chicory.
H. E. Oakes	do	Adulterated with about 35 per cent chicory.
G. J. Hoyt	do	Unadulterated; contains only a very small quantity of chicory.
George Taylor	do	do do do

APPENDIX C.—INSPECTION OF FOOD,

LIQUORS.

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis. Specific Gravity.	Result of Analysis. Alcohol by Weight.	Result of Analysis. Alcohol by Volume.	Result of Analysis. Proof Spirits.
1891.					p. c.	p. c.	p. c.	p. c.
June 8...	M. Bowman....	Halifax	3617	10675	0·9426	38·94	46·20	80·96
do 8...	do	do	3618	10676	0·9501	34·43	41·21	72·22
do 8...	do	do	3619	10677	0·9430	39·50	46·80	82·02
do 9...	do	do	3620	10678	0·9343	42·62	50·16	87·91
do 9...	do	do	3621	10679	0·9513	34·10	40·84	71·58
do 9...	do	do	3622	10680	0·9600	28·94	34·97	61·29
do 9...	do	do	3623	10681	0·9485	36·72	43·75	76·67
do 10...	do	do	3624	10682	0·9575	30·67	36·95	64·76
do 22...	do	do	3625	10683	0·9333	44·96	52·63	92·23
do 22...	do	do	3626	10684	0·9534	32·62	39·18	68·87
do 22...	do	do	3627	10685	0·9494	35·50	42·40	74·30
do 23...	do	do	3628	16686	0·9437	39·65	46·95	84·31
do 23...	do	do	3629	10687	0·9549	32·25	38·75	67·92
do 23...	do	do	3630	10688	0·9534	32·94	39·54	69·29
do 24...	do	do	3631	10689	0·9499	37·11	44·18	77·42
do 24...	do	do	3632	10690	0·9404	42·62	50·16	87·91
do 24...	do	do	3633	10691	0·9538	32·62	39·18	68·67
do 24...	do	do	3634	10692	0·9553	32·06	38·53	67·55
do 24...	do	do	3635	10693	0·9130	52·59	60·79	106·55
do 24...	do	do	3636	10694	0·9510	34·62	41·42	72·59
do 24...	do	do	3637	10695	0·9258	47·05	54·80	96·94
do 24...	do	do	3638	10696	0·9255	47·05	54·80	96·04
do 24...	do	do	3639	10697	0·9464	38·28	45·47	79·68
do 24...	do	do	3640	10698	0·9626	27·29	33·06	57·94
do 24...	do	do	3641	10699	0·9261	47·05	54·80	96·04
do 24...	do	do	3632	10700	0·9368	43·90	51·53	90·30
do 24...	do	do	3643	10701	0·9422	39·10	46·37	81·26
do 24...	do	do	3644	10702	0·9481	35·85	42·78	74·96
do 24...	do	do	3645	10703	0·9250	47·41	55·18	96·70
do 24...	do	do	3616	10704	0·9376	41·30	48·43	84·87

DRUGS, &c.—Tabulated Statement—*Continued.*

Vendor.	Residence.	Observations.
Chas. Robinson	Halifax, N.S	Demarara Rum; unadulterated.
John P. Cahill	do	Henker Gin do
J. T. Sullivan	do	Hennessy's Brandy do
Thos. Doyle	do	Scotch Whiskey do
John Mullane	do	Rye do do
Chas. A. Coin	do	Bourbon do do
R. W. McDonald	do	Jubilee Rye Whiskey do
James Yetman	do	Rye Whiskey do
J. C. Mahon	Truro	Brandy do
do	do	Old Rye Whiskey do
N. A. Ross	do	Old Rye Bourbon Whiskey; unadulterated.
Chas. C. Rood	Pictou, N.S.	Brandy; unadulterated.
do	do	Rye Whiskey; unadulterated.
do	do	Scotch Whiskey do
Wm. McDonald	Port Mulgrave	Rye do do
John Stapleton	Port Hawkesbury	Demarara Rum do
do	do	Scotch Whiskey do
Mrs. C. Ormond	North Sydney	Rye do do
Mrs. E. Burke	do	Scotch do do
Thos. Gannon	do	Rye do do
Jos. Gannon	do	Scotch do do
John Smith	do	Holland Gin do
Chas. Ross	Sydney	Brandy do
Mrs. S. Oneill	do	Rye Whiskey do
J. D. McLean	Antigonish	Scotch do do
J. D. Copeland	do	Brandy do
John McInnis	do	Scotch Whiskey do
J. M. Jackson	New Glasgow	Rye do do
A. C. Bell	do	Jamaica Rum do
Hugh Murray	do	Scotch Whiskey do

APPENDIX C.—INSPECTION OF FOOD,

SUGAR AND

Date.		Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis.			
						Ash.	Moisture.	Glucose.	Cane Sugar.
1891.						p. c.	p. c.	p. c.	p. c.
Feb.	2	W. F. Best	St. John, N.B	5601	9936	0·31	1·33	5·34	92·60
do	2	do	do	5602	9937	1·00	3·71	9·32	83·25
do	2	do	do	5603	9938	0·86	3·24	8·06	86·95
do	2	do	do	5604	9939	0·06	1·55	2·45	96·18
do	2	do	do	5605	9940	0·65	3·30	7·70	88·27
do	2	do	do	5606	9941	0·04	0·10	2·90	96·42
do	3	do	do	5607	9942	2·48	22·80	39·38	27·12
do	3	do	do	5608	9943	3·59	27·40	32·60	30·94
do	3	do	do	5609	9944	2·67	26·90	31·02	36·34
do	6	do	do	5610	9945	2·55	30·20	17·55	48·16
do	6	do	do	5611	9946	1·43	30·90	16·53	49·45
do	6	do	do	5612	9947	2·14	29·90	21·96	42·23
do	6	do	do	5613	9948	1·22	29·40	24·00	44·08
do	16	do	do	5614	9949	1·05	1·79	2·72	94·60
do	16	do	do	5615	9950	0·82	2·14	6·16	90·20
do	16	do	do	5616	9951	0·05	0·08	2·94	96·89
do	16	do	do	5617	9952	1·15	30·50	16 24	52·67
do	16	do	do	5618	9953	2·10	23·70	41·20	20·18
do	20	do	do	5619	9954	0·02	0·07	1·58	97·48
do	20	do	do	5620	9955	0·88	4·43	10·29	83·80
do	20	do	do	5621	9956	1·02	3·85	7·92	86·73
do	20	do	do	5622	9957	2·54	23·40	39·62	32·47
do	20	do	do	5623	9958	1·61	32·80	15·96	44·58
do	23	do	do	5624	9959	0·03	0·08	1·36	97·73
do	23	do	do	5625	9960	1·06	7·92	7·34	83·48
do	23	do	do	5626	9961	0·67	5·05	3·54	90·63
do	23	do	do	5627	9962	3·41	25·20	39·17	24·22
do	23	do	do	5628	9963	1·27	34·20	16·98	39·35
do	23	do	do	5629	9964	1·64	31·50	21·96	37·95
do	25	do	do	5630	9965	0·92	3·53	1·63	93·46
do	25	do	do	5631	9966	0·02	0 04	1·62	98·28
do	25	do	do	5632	9967	0·93	6·48	5·61	87·11
do	25	do	do	5633	9968	3·75	28·60	33·28	22·15
do	25	do	do	5634	9969	2·87	23·30	38·23	26·13
do	25	do	do	5635	9970	1·30	33·30	14·72	44·73
do	25	do	do	5636	9971	1·66	31·70	17·43	47·38

DRUGS, &c.—Tabulated Statement—*Continued.*

SYRUP.

Vendor.	Residence.	Observations.	
Jardine & Co	St. John, N.B	Sugar ;	not adulterated.
Fred. Goddard	do	do	do
John O'Gorman	do	do	do
M. H. Gallagher	do	do	do
Taylor & Dockrill	do	do	do
McPherson Bros	do	do	do
Puddington & Merritt	do	S. H. syrup	do
Jardine & Co	do	do	do
Stewart Grocery	do	do	do
Thos. W. Dunlop	do	Molasses	do
G. S. DeForest & Son	do	do	do
George S. Parker	do	do	do
W. A. Magee	do	do	do
J. S. Moloney	St. Andrew's, N.B.	Sugar	do
John Burton	do	do	do
B. F. DeWolfe	do	do	do
J. S. Moloney	do	Molasses	do
Hart & Grimlaw	do	Syrup	do
J. C. Murray	St. Stephen's, N.B.	Sugar	do
Murchie Bros	do	do	do
Inches & Grimmer	do	do	do
W. W. Toul	do	Syrup	do
Ganong & Wilson	do	Molasses	do
W. B. Belyen	Woodstock, N.B.	Sugar	do
H. M. Payson	do	do	do
John Graham	do	do	do
J. W. Dalling	do	do	do
J. C. Cole & Son	do	Molasses	do
A. J. Marsten	do	do	do
George Hatt & Son	Fredericton, N.B.	Sugar	do
W. H. VanWart	do	do	do
W. A. Perkins	do	do	do
George Hatt & Sons	do	Syrup	do
G. T. Whelply	do	do	do
Wilmot, Guion & Co	do	Molasses	do
W. H. Scully & Co	do	do	do

APPENDIX C.—INSPECTION OF FOOD,

LIQUORS.

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis.				
					Specific Gravity.	Alcohol by Volume	Alcohol by Weight.	Total Solids	Ash.
1891.					p. c.	p. c.	p. c.	p. c.	p. c.
May 8	W. F. Best......	St. John, N. B ...	5637	9972	900·01	61·00	53·20	0·12	0·02
do 9	do	do	5638	9973	942	44·47	38·28	0·17	0·02
do 9	do	do	5639	9974	9422	45·47	38·28	0·04	0·00
do 9	do	do	5640	9975	9271	52·29	45·59	0·17	0·00
do 11	do	do	5641	9976	9414	46·08	38·83	0·20	0·00
do 11	do	do	5642	9978	9116	60·56	52·73	0·56	0·00
do 11	do	do ...	5643	9979	933·7	50·37	42·81	0·14	0·00
do 12	do	do	5644	9970	933·1	50·37	42·81	1·53	0·00
May 18	do	do	5645	9981	941·4	45·08	38·83	0·20	0·03
....	do	do	5646	9982	938·3	47·72	40·37	0·13	0·00
May 20	do	do	5647	9985	943·6	44·86	37·72	0·20	0·00
....	do	do	5648	9986	927·0	53·29	45·59	0·17	0·00
May 22	do	do	5649	9988	905·5	63·28	55·45	0·06	0·02
....	do	do ...	5650	9989	940·8	46·64	39·35	0·12	0·00
May 26	do	do	5651	9991	904·4	63·73	55·91	0·06	0·00
....	do	do	5652	9993	942·8	45·47	38·28	0·15	0·00

PEP

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis.			
					Moisture.	Total Ash.	Soluble Ash.	Insoluble Ash.
1890.					p. c.	p. c.	p. c.	p. c.
July 24....	Dr. M. Fiset...........	Quebec..........	1197	9162	9 800	20·000	2·000	8·800
do 24....	do	do	1198	9163	11 800	2·300	1·200	0·050
do 24....	do	do	1199	9164	11·500	1·300	0·300	1·000
do 24....	do	do	1200	9165	8·500	5 400	1·200	1·500
do 24...	do	do	4201	9166	10·500	3·900	1·200	0·800
do 24....	do	do	4202	9167	8.600	16·400	1·700	10·200
do 24 ...	do	do	4203	9168	10·500	2·100	1·000	0·100
do 24. .	do	do	4204	9169	6·200	12·800	2·000	1·400
do 24....	do	do	4205	9170	10·600	7·800	2·000	2·400
do 24....	do	do	4206	9171	7·800	28·400	0·500	22·300
do 24....	do	do	4207	9172	11·500	1·400	0·700	0·100
do 24....	do	do	4208	9173	9·300	13·600	1·400	8·500
do 24....	do	do	4219	9174	8·400	15·200	1·000	4·100
do 24....	do	do	4210	9175	10·000	6·400	1·800	1·600
do 24....	do	do	4211	9176	9·900	7·900	2·100	2·500
do 31....	do	do	4212	9192	9·600	6.000	2·300	0·800
do 31....	do	do	4213	9193	10·600	2·800	1·800	1·000
do 31....	do	do	4214	9194	10·400	3·600	1·800	1·800
do 31....	do	do	4215	9195	9·200	6·400	3·400	3·000
do 31....	do	do	4216	9196	10·400	2·600	1·600	1·000
do 31....	do	do	4217	9197	8·400	5·400	3·000	2·400
do 31....	do	do	4218	9198	8·200	12·000	1·400	0·300
do 31....	do	do	4219	9199	10·200	4·400	2·800	0·200

DRUGS, &c—Tabulated Statement—*Continued.*

Vendor.	Residence.	Observations.
T. W. Bell	St. John, N. B	Scotch Whiskey; not adulterated.
Jos. Tonsecor	do	Irish do do
Thos. E. Morrow	do	Gin; not adulterated.
Thos. Evans	do	Whiskey, Bourbon; not adulterated.
Thos. H. Haley	do	do Rye do
John Horne & Co	do	Jamaica Rum do
Peter Mahoney	do	Scotch Whiskey do
Thos. Ryffin	do	Irish do do
Chas. H. Fairweather	Sussex, King's County	Bourbon do do
do	do	Rye do do
Thos. J. Gorman	Moncton, N. B	Rye do do
John Donovan	do	Irish do do
Michael Harley	Shediac, N. B.	Scotch do do
do	do	Rye do do
Thos. Estabrook	Sackville, N. B	Scotch do do
do	do	Rye do do

PER.

Vendor.	Residence.	Observations.
M. Boyce & Son	Quebec	Unfit for use, and may be injurious to health.
do	do	Good.
P. & F. Ouellet	do	do
do	do	Fairly good.
O. Vocelle	do	Pure.
do	do	Adulterated by the addition of earth and sand.
O. Lefebvre	do	Good.
do	do	Adulterated.
N. Laberge	do	Fairly good.
John Lemelin	do	Adulterated by sand and red pepper.
do	do	A little foreign starch.
E. Anger	do	Adulterated by the addition of red pepper and sand.
do	do	do with sand and foreign starch.
Alex. Grant	do	Good, with a little red pepper.
E. Bedard & Co.	do	Fairly good; a little red pepper.
W. H. Fuller	Sherbrooke, Que	do mixed with Cayenne pepper.
do	do	Good.
McDonald Bros	do	do no foreign starch; mixed with red pepper.
do	do	Fairly good; mixed with red pepper and foreign starch
J. A. Dubuic	do	Good; mixed with foreign starch.
do	do	do do red pepper and foreign starch.
Parker & Bourque	do	do adulterated with sand.
L. Proulx & Co	do	do no foreign starch.

APPENDIX C.—INSPECTION OF FOOD,

SUGAR AND

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis.		
					Moisture.	Glucose.	Sucrose.
1890.					p. c.	p. c.	p. c.
Oct. 28	Dr. M. Fiset	Quebec	4220	9238	3·600	5·500	90·900
do 28	do	do	4221	9239	4·600	2·940	92·460
do 28	do	do	4222	9240	2·800	3·333	93·867
do 28	do	do	4223	9241	0·300	....	99·700
do 28	do	do	4224	9242	0·300	....	99·700
do 28	do	do	4225	9243	0·200	3·640	96·160
do 29	do	do	4226	9244	23·900	15·151	60·949
do 29	do	do	4227	9245	0·200	1·000	98·800
do 29	do	do	4228	9246	22·400	33·600	44·000
do 29	do	do	4229	9247	26·400	17·600	56·000
do 29	do	do	4230	9248	1·000	12·800	86·200
do 29	do	do	4231	9249	0·450	0·800	98·750
do 29	do	do	4232	9250	27·750	13·750	58·500
do 29	do	do	4233	9251	2·500	2·500	95·000
do 29	do	do	4234	9252	22·600	45·350	32·050
do 29	do	do	4235	9253	26·700	16·000	57·300
do 29	do	do	4236	9254	25·300	18·860	55·840
do 29	do	do	4237	9255	30·400	25·200	44·400
do 29	do	do	4238	9256	28·000	10·000	62·000
do 29	do	do	4239	9257	30·000	12·700	57·300
do 30	do	do	4240	9258	25·000	8·300	67·700
do 30	do	do	4241	9259	0·100	....	99·903
do 30	do	do	4242	9260	3·000	5·590	91·400
do 30	do	do	4243	9261	22·520	20·000	57·480
do 30	do	do	4244	9262	3·320	0·350	96·330
do 30	do	do	4245	9263	23·600	21·700	54·700
do 30	do	do	4246	9264	2·900	2·900	94·200
do 30	do	do	4247	9265	0·200	0·800	99·000
do 30	do	do	4248	9266	27·00	11·100	61·900
Nov. 12	do	do	4249	9305	23·800	12·900	63·300
do 12	do	do	4250	9306	0·100	1·100	98·800
do 12	do	do	4251	9307	25·000	12·100	63·900
do 12	do	do	4252	9308	3·000	6·600	90·400
do 12	do	do	4253	9309	23·400	18·200	58·400
do 12	do	do	4254	9310	18·800	16·900	64·300
do 12	do	do	4255	9311	5·200	0·900	93·900

DRUGS, &c.—Tabulated Statement—*Continued.*

SYRUP.

Vendor.	Residence.	Observations.
E. Auger	Quebec	Yellow sugar; good.
do	do	do do
do	do	do do
do	do	Granulated sugar; nearly pure.
M. Thibadeau	do	Loaf sugar do
do	do	Pulverised sugar; good.
Letourneau & Frere	do	Syrup do
do	do	Granulated sugar do nearly pure.
V. Gimeau	do	Golden syrup; a large proportion glucose.
do	do	Molasses; fairly good.
do	do	Sugar; good.
do	do	Granulated sugar; very good.
J. B. Coute	do	Molasses; fair.
do	do	Yellow sugar; good.
Hardy & Drolet	do	Golden syrup; very strong proportion glucose.
do	do	Molasses; fair.
J. O'Donnell	do	do fairly good.
do	do	Golden syrup; fair.
Louis Mercier	do	Molasses; good.
Louis Poulin	do	do do
W. Lawler	Levis, Que.	do do
do	do	Granulated sugar; pure.
do	do	Yellow sugar; good.
E. Bedard	do	Molasses; fairly good.
do	do	Granulated sugar; good quality.
Beaulieu, Lambart & Co	do	Syrup; good sample.
do	do	Yellow sugar; good sample.
do	do	Granulated sugar; pure.
Gilbert Carrier	do	Syrup; very good quality.
J. D. Lacerte	Somerset, Que	Barbadoes sugar; good.
do	do	Granulated sugar; nearly pure.
L. E. Thibadeau	do	Barbadoes syrup; good quality.
do	do	Yellow sugar; good.
Savoie & Droner	do	Barbadoes molasses: fairly good.
do	do	Porto Rico molasses; good.
do	do	Granulated sugar; very pure.

APPENDIX C.—INSPECTION OF FOOD,

LIQU

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of			
					Specific Gravity.	Volume.	Weight.	Solids.
1891.					p. c.	p. c.	p. c.	p. c.
Apr. 15....	Dr. M. Fiset..........	Quebec........	4274	9364	0·9533	39·25	32·69	....
do 15....	do	do	4275	9365	0·9601	33·730	27·860	....
do 15....	do	do	4276	9366	0·9285	53·00	42·270	0·100
do 15....	do	do	4277	9367	0·9467	43·130	36·060	0·850
do 16....	do	do	4278	9368	0·9351	49·760	42·240	....
do 16....	do	do	4279	9369	0·9339	50·000	42·702	0·700
do 16....	do	do	4280	9370	0·9527	39·700	33·240	0·600
do 17....	do	do	4281	9371	0·9542	38·600	32·006	0·050
do 17....	do	do	4282	9372	0·9526	39·720	33·140	0·140
do 17....	do	do	4283	9373	0·9477	42 560	35·65	....
do 17....	do	do	4284	9374	0·9567	36·89	30·61	....
do 17....	do	do	4285	9375	0·9339	50·370	42 950	2·500
do 17....	do	do	4286	9376	0·8501	84·90	79·28	....
do 17....	do	do	4287	9377	0·9289	45·100	37·720	1·200
do 17....	do	do	4288	9378	0·9415	46·32	39·05	....
do 17....	do	do	4289	9379	0·9549	38·11	31·69	....
May 11....	do	do	4290	11509	0·9522	40·00	33·35	....
do 11....	do	do	4291	11510	0·9660	29·670	24·38	....
do 11....	do	do	4292	11511	0·9029	65·00	57·20	....
do 11....	do	do	4293	11512	0·9286	53·000	45·32	1·400
do 12....	do	do	4294	11513	0·9554	37·760	31·37	....
do 12....	do	do	4295	11514	0·9242	55·00	47·32	0·500
do 12....	do	do	4296	11515	0·9548	38·110	31·75	....

DRUGS, &c.—Tabulated Statement—*Continued.*

ORS.

Analysis.			Vendor.	Residence.	Observations.
Ash.	Analytical Compound.	Proof Spirit.			
p. c.	p. c.	p. c.			
....	....	68·79	Wm. Jos. Flibottle....	St. Hyacinthe, Q.	Whiskey, draught; fair.
....	....	59·11	C. Ledoux	do ..	do do
none	none	72·898	N. Beauregard...	do ..	Rye whiskey, draught; good.
do	....	75·59	O. Brodeur..	do ..	Brandy; good.
....	......	87·200	H. O. Fortier	Sherbrooke, Que.	Whiskey, draught; good.
....	....	88·260	Fortier & Therrien....	do ..	Rum do
.. ..	....	69·65	T. Carriere & Fils.....	do ..	Rye whiskey do
....	....	67·67	N. Chouinard.........	Quebec.........	do fair.
....	. ...	69·65	E. Sylvain...........	do	do do
....	trace	74·59	G. W. Pelletier........	do	Gin, draught do
....	do	64·76	George Lemelin.......	do	Whiskey; near fair.
0·075	none	88·26	H. Derome...........	do	Rum; fairly good.
....	....	148·84	Louis Poulin........ .	do	Highwines; good.
0 050	none	92·56	F. X. Soucey	do	Rye whiskey do
....	trace	81·17	Mrs. J. A. Quinn.	do	Whiskey do
....	do	66·80	Jos. Demers	do	Whiskey, draught; fairly good.
....	. .. ..	70·11	Jos. Levasseur........	Three Rivers, Q.	Rye whiskey; fair.
....	traces	51·00	Louis Bergeron........	do ..	Whiskey; too much diluted.
....	....	113 92	J. Cloutier...........	do ..	Scotch whiskey; good.
....	trace	92·81	Rousseau & Durand...	do ..	Rum; good.
....	....	66·18	Nazaire Leblanc......	Joliette, Que....	Whiskey; fairly good.
....	....	96·45	Jos. Rivard..........	do	Brandy; good.
1·400	traces	66·93	Jules Desoiniers . ..	do	Rye whiskey; fair.

APPENDIX C.—INSPECTION OF FOOD,

PEP

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of			
					Volatile 100°.	Soluble Ash.	Insoluble Ash.	Total Ash.
1890.					p. c.	p. c.	p. c.	p. c.
July 8....	Dr. J. B. Edwards....	Montreal.....	1716	9147	1·975	Traces.	2·5	18·88
.. ..	do	do	1717	9148	2·92	do	1·52 1·40	2·92
... .	do	do	1718	9149	8·00	do	2·5 1·0	3·5
....	do	do	1719	9150	3·75	....	....	2·90
July 9....	do	do	1720	9151	8·2	....	.. ..	2·40
do 9 ...	do	do	1721	9152	8·2	....	....	2·89
do 9....	do	do	1722	9153	9·6	....	... ...	2·89
do 28....	do	do .. .	5007	9177	....	7·5	1·7	9·2
do 28....	do	do	5008	9178	....	·49	·79	1·28
do 28....	do	do	5009	9179	4·2	1·5	2·0	3·5
do 28....	do	do	5010	9180	4·2	2·3	11·2	13·5
do 28....	do	do	5011	9181	9·5	2·6	1·9	3·9
do 28....	do	do	5012	9182	10·0	1·0	2·56	3·56
do 28....	do	do	5013	9183	11·2	1·5	1·5	3·00
do 29 ...	do	do	5014	9184	11·5	·41	2·0	2·41
do 29....	do	do	5015	9185	10·1	1·6	2·0	3·6
do 29....	do	do	5016	9186	9·2	3·0	12·0	15·0
do 29....	do	do	5017	9187	11·31	·80	4·1	4·9
do 29...	do	do	5018	9188	12·1	·7	2·8	3·5
do 29....	do ...	do	5019	9189	11·00	4·00	10·2	14·0
do 29....	do	do	5020	9190	10·5	4·00	2·2	6·2
do 29....	do	do	5021	9191	10·02	. .. ..	....	5·1
do 21....	do	do	1723	9154	8·4	.. .. ..	....	....
do 21....	do	do	1724	9155	8·0	.. .. ..	... .	....
do 21....	do ...	do	1725	9156	10·4	....	....	....
do 21 ...	do	do	1726	9157	10·0	....	......	....
do 21....	do	do	1727	9158	7·1	....	....	....
do 21 ..	do	do	1728	9159	8·0	....	....	.. .. .
do 21....	do ...	do	1729	9160	9·00	....	....	....
do 21....	do	do	1730	9161	5·4	.. . ...	.. . ...	....

DRUGS, &c.—Tabulated Statement.—*Continued.*

PER.

ANALYSIS.			Vendor.	Residence.	Observations.
Mineral Matter.	Starches	Foreign Vegetable Substance.			
p. c.	p. c.	p. c.			
Silica & silicates.			J. W. Wright	Montreal	Adulterated with pepper dust, over 10 p.c.
Quarts silicates.			do	do	Fairly genuine pepper; cells abundant.
			E. C. Legault	do	Adulterated to the extent of over 10 p.c.
			do	do	do with 30 or 40 p.c. of cayenne.
			E. Jubinville	do	Genuine.
			do	do	Adulterated with mixed husks, pepper dust and millings.
			Jos. Archambault	do	Adulterated to the extent of 30 p.c. with starch and millings.
			Ducheneau & Barbeau	do	Adulterated; contains wheat and other foreign starches.
			do	do	Adulterated; foreign starch; chiefly Indian corn.
			T. H. Lesage	do	Adulterated; foreign starch in large excess; also with pepper dust, husks, &c.
			do	do	Adulterated; contains wheat flour and substance resembling cocoa.
			P. Dessoniers	do	Adulterated; contains mixed cereal starches and foreign and vegetable structures.
			do	do	Adulterated; contains mixed cereal starches and foreign vegetable starches.
			P. J. Rowan	do	Adulterated with mixed starches and red fungi.
			R. Walsh	do	do do
			do	do	Adulterated; mixed starches and pepper dust in large proportion.
			W. Hunter	do	Adulterated; contains pepper dust and aluminous earth.
			do	do	Genuine; no foreign tissue or starch.
			Arthur Bourdeau	do	do do
			M. Hodge	do	Impure; adulteration doubtful; contains sand and pepper dust.
			J. Aubin	do	Adulterated largely; contains foreign starches, chiefly rice.
			Bromlett & Co.	do	Adulterated largely; contains wheat flour and other starches, millings and pep. dust.
2·0	2·0	8·5	E. Cunningham	do	Contains an excess of soil; not adulterated.
4·1	1·3	0·5	do	do	Genuine pepper.
0·5	1·1	1·6	Lafletche & Murphy	do	Unadulterated.
2·0	2·0	2·00	do	do	Adulterated to the extent of 10 or 15 p.c. with mixed millings.
0·10	1·10	1·00	H. A. Respello	do	Genuine.
2·10	6·30	6·16	do	do	Adulterated with ferruginous earth.
2·53			Paul Major	do	do with foreign starches, 15 to 20 p.c.
5·4			do	do	Adulterated to extent of 15 to 20 p.c.; contains mustard husk and millings.

APPENDIX C—INSPECTION OF FOOD,

SUGAR, SYRUP

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of			
					Moisture.	Cane Sugar.	Glucose.	Organic Matter.
					p. c.	p. c.	p. c.	p. c.
1890. Oct. 22....	Dr. J. B. Edwards ...	Montreal.....	1731	9228	4·00	85·50	7·68	2·76
do 22....	do	do	1732	9229	0·05	99·90	....	....
do 22....	do ...	do	1733	9230	4·25	84·50	8·44	2·81
do 22....	do	do	1734	9231	....	100·00	....	....
do 22....	do	do	1735	9232	4·15	84·37	8·00	....
do 22 ...	do ...	do	1736	9233	0·10	99·80	....	....
do 23....	do ...	do ...	1737	9234	0·22	99·10	....	....
do 23....	do	do	1738	9235	3·97	88·80	7·94	....
do 23....	do	do	1739	9236	4·07	86·13	7·01	....
do 23....	do ...	do	1740	9237	5·00	82·61	7·89	....
Nov. 4....	do	do	1741	9267	31·37	56·10	12·53	....
do 4....	do ...	do	1742	9268	41·70	46·10	12·20	....
do 4....	do	do	1743	9269	....	....	20·88	....
do 4....	do	do	1744	9270	36·63	51·00	12·37	....
do 5....	do	do	1745	9271	43·86	33·00	23·14	.....
do 5....	do .. .	do	1746	9272	....	....	12·16	....
do 5....	do	do	1747	9273	39·56	47·20	13·24	....
do 5....	do	do	1748	9274	41·85	46·20	11·95	....
do 5....	do	do	1749	9275	39·60	48·80	12·00	....
do 5....	do	do	1750	9276	47·56	44·00	8·44	....
do 11....	do	do	1751	9277	·10	99·90	....	....
do 11....	do	do	1752	9278	45·40	40·70	13·90	....
do 11....	do	do	1753	9279	36·95	52·80	10·25	....
do 11...	do	do	1754	9280	3·50	84·15	8·20	....
do 11....	do	do	1755	9281	·20	99·80	....	....
do 11....	do	do	1756	9282	38·27	49·50	12·23	....
do 11....	do	do	1757	9283	39·49	43·00	17·51	....
do 11 ...	do	do	1758	9284	36·90	53·20	9·90	....
do 11....	do	do	1759	9285	0·02	99·08	....	....
do 11....	do	do	1760	9286	2·75	85·25	6·74	....
do 11....	do	do	1761	9287	....	54·0	9·36	....
do 11....	do	do	1762	9288	....	56·0	8·44	....
do 11...	do	do	1763	9289	....	39·16	16·57	....
do 11...	do	do	1764	9290	....	91·30	4·91	....
do 12....	do	do	1765	9291	....	39·60	12·69	....
do 12....	do	do	1766	9292	35·81	50·50	12·69	....
do 12....	do	do	1767	9293	....	99·9	0·0	....
do 12....	do	do	1768	9294	45·2	38·00	16·80	....
do 12....	do	do	1769	9295	38·77	51·70	9·53	....
do 12....	do	do	1770	9296	0·01	99·9	....	....
do 12....	do	do	1771	9297	3·90	84·00	7·00	5·10
do 12....	do	do	1772	9298	38·86	51·50	9·64	....
do 12....	do	do .. .	1773	9299	38·10	48·40	13·50	....
do 12....	do	do	1774	9300	7·15	85·50	7·35	....
do 12....	do	do	1775	9301	35·81	55·00	9·19	....
do 12....	do	do	1776	9302	0·1	99·9	....	....
do 12....	do	do	1777	9303	6·73	86·50	6·77	....
do 12....	do	do	1778	9304	4·73	48·50	6·77	....

DRUGS, &c.—Tabulated Statement—*Continued.*

AND MOLASSES.

ANALYSIS			Vendor.	Residence.	Observatious.
Polarising Value.	Dextrine.	Insoluble.			
p. c.	p. c.	p. c.			
			J. J. Robillard	Montreal.	Yellow sugar; nothing abnormal; in excess of glucose and colouring matter.
			do	do	Granulated; pure sugar.
			J. N. Collet	do	Yellow sugar; unadulterated; contains an excess of glucose and colouring matter.
			do	do	Pulverized sugar; pure sugar.
			Thomas Cathcart	do	Yellow sugar; unadulterated; contains excess of glucose and colouring matter.
			do	do	Granulated sugar; pure.
			M. Leduc	do	Loaf sugar; practically pure sugar.
			do	do	Yellow sugar; genuine; glucose and colouring in excess.
			Hamel J. Theriault	do	Yellow sugar; unadulterated.
			do	do	do do
			James Donnelly	do	Amber syrup; genuine.
			do	do	Molasses; contains an excess of megiss.
134·2			J. Swail & Co.	do	Amber syrup; adulterated with dextrine.
			do	do	Molasses; genuine.
			E. Brown	do	do contains excess of megass & glucose
118·25			do	do	Golden syrup; adulterated with dextrine.
			M. P. Laverty	do	do moisture in excess, but not adulterated.
			do	do	Molasses; unadulterated.
			W. J. Rafferty	do	do genuine.
			E. C. Legault	do	do below grade; adulteration doubtful.
			F. A. Brodeur	St. Hyacinthe, Q.	Granulated sugar; genuine.
			do	do	Syrup; contains an excess of glucose.
			do	do	Molasses; genuine.
		4 15	N. P. Viens	do	Yellow sugar; impure; adulteration doubtful.
			do	do	Loaf sugar; genuine.
			Tagnuels Frère	do	Molasses; genuine.
			do	do	Syrup; excess of glucose; adulteration doubtful.
			A. Dubois	Actonvale, Q.	Molasses; genuine.
			do	do	Granulated sugar; pure sugar.
		5 26	H. Blanchet	do	Yellow sugar; impure; adulteration doubtful.
			do	do	Molasses; genuine; but low quality.
			H. Debrule	do	do unadulterated.
			G. Deland	do	Syrup; in excess of glucose; adulteration doubtful.
			do	do	Yellow sugar; of fair quality.
			L. Jutras	Richmond, Q.	Syrup; contains an excess of glucose; adulteration doubtful.
			do	do	Molasses; unadulterated.
			do	do	Granulated sugar. Genuine extra pure.
			D. J. Bedard	do	Syrup. A weak syrup; adulteration doubtful.
			do	do	Molasses. Unadulterated.
			John Park	do	Granulated sugar. A pure sugar.
			do	do	Yellow sugar. Of low quality; adulteration doubtful.
			S. X. Martel	Arthabaskaville.	Barbadoes sugar. Unadulterated.
			L. Masseu	do	Molasses. Unadulterated.
			do	do	Yellow sugar. Excess of glucose and moisture.
			D. O. Bourbeau	do	Barbadoes syrup. Of inferior quality; adulteration doubtful.
			do	do	Granulated sugar. Normal. Of standard purity.
			J. O. Bourbeau	do	Yellow sugar. Unadulterated.
			do	do	Molasses. Unadulterated.

APPENDIX C—INSPECTION OF FOOD,

COF

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis.				
					Specific Gravity.	Sugar.	Soluble Ash.	In-soluble Ash.	Caffeine
1891.									
Jan. 8......	Dr. J. B. Edwards	Montreal...	5001	9330	1009·29	0·35	3·70	1·00	·369
do 8	do ..	do ...	5002	9331	1009·30	2·10	2·80	1·10	·317
do 8......	do ..	do ...	5003	9332	1012·10	3·04	3·34	0·71	·554
do 8......	do ..	do ...	5004	9333	1014·80	4·00	3·15	0·95	·398
do 8 . ..	do ..	do ...	5005	9334	1009·90	1·02	3·20	0·90	·398
do 8. .. .	do ..	do ..	5006	9335	1014·20	2·15	2·70	0·90	traces.

LIQU

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis.				
					Specific Gravity.	Alcohol by Weight.	Alcohol by Volume.	Solids.	Ash.
1891.					p. c.	p. c.	p. c.	p. c.	p. c.
April 8..	Dr. J. B. Edwards.	Montreal...	5022	9354	·9579	30·00	36·34	·004	·001
do 8..	do ..	do ..	5023	9355	·9647	25·68	31·00	·004	·001
do 8..	do ..	do ..	5024	9356	·9263	45·56	53·24	·058	·020
do 9..	do ..	do ..	5025	9357	·9586	30·86	37·00	·748	·013
do 9..	do ..	do ..	5026	9358	·9253	47·18	54·90	·108	traces
do 9..	do .	do ..	5027	9359	·9586	29·8	36·00	·105	·012
do 9..	do ..	do ..	5028	9360	·9385	42·12	49·55	·678	·020
do 9..	do ..	do ..	5029	9361	·9516	34·00	40·78	·026	traces
do 22..	do ..	do ..	5030	9380	·9635	26·75	32·24	·002	do
do 22..	do ..	do ..	5031	9381	·9658	24·69	30·00	·004	do
do 22..	do ..	do ..	5032	9382	·9627	26·88	32·57	·08	do
do 22..	do ..	do ..	5033	9383	·9681	23·25	28·31	·120	do
do 22..	do ..	do ..	5034	9384	....	....	....	0·112	do
do 22..	do ..	do ..	5035	9385	·9321	44·00	51·56	0·016	do
do 22..	do ..	do ..	5036	9386	·9375	42·12	49·55	0·014	·0056
do 22..	do ..	do ..	5037	9387	·9424	40·75	48·20	1·304	·008
do 22..	do ..	do ..	5038	9388	·9640	26·43	32·23	·07	traces
do 22..	do ..	do ..	5039	9389	·9481	35·87	42·79	·01	do
do 28..	do ..	do ..	5040	9391	·9666	24·83	30·20	·04	do
do 28..	do ..	do ..	5041	9392	·9332	47·97	55·60	·024	do
do 28..	do ..	do ..	5042	9393	·9625	25·42	30·95	·012	do
May 2..	do ..	do ..	5043	9397	·9627	26·93	32·67	·004	do
do 4..	do ..	do ..	5044	11501	·9510	34·36	41·00	·16	do
do 4..	do ..	do ..	5045	11502	·9653	25·00	30·30	·012	do
do 4..	do ..	do ..	5046	11503	·9297	47·46	55·23	1·5	·016
do 5..	do ..	do ..	5047	11504	·8885	65·83	73·14	·008	traces
do 5..	do ..	do ..	5048	11505	·9570	30·80	37·04	·100	do
do 5.	do ..	do ..	5049	11506	·9596	28·88	34·90	·012	do
do 13..	do ..	do ..	5050	11516	·9704	21·72	26·58	·020	do
do 13..	do ..	do ..	5051	11518	·9569	30·65	36·78	·180	do
do 13..	do ..	do ..	....	11517	....	....	....	....	....

DRUGS, &c.—Tabulated Statement—*Continued.*

FEE.

Vendor.	Residence.	Observations.
W. Casselman	Montreal	No foreign structure; genuine coffee.
Edmond & Belhumeur.	do	Contains about 10 per cent chicory; adulterated with chicory [if sold as pure.
do	do	Adulterated if sold as pure coffee.
Jos. Audet	do	do do
A. Plants	do	do do
do	do	Largely adulterated with chicory and roasted corn and pea meal.

ORS.

Vendor.	Residence.	Observations.
Alfred Lefleur	Lachute, Que.	Whiskey; not adulterated, but contains a trace of fusil oil.
Moïse Paquet	do	do probably reduced by water.
James Curry	do	Gin; not adulterated; a fair commercial article.
Calixte Rouleau.	Hull, Que	Proof whiskey; not adulterated, but traces of fusil oil.
M. J. Laverdure	do	Gin; unadulterated.
N. Landry	do	Rye whiskey; unadulterated.
J. Goyette	do	Brandy; unadulterated.
F. Barrette.	do	Whiskey do but contains fusil oil.
J. Champagne	Montreal	Rye whiskey; probably reduced in strength by water; adulteration; doubtful.
Marcel Lemieux	do	Whiskey do do
Mrs. Charles Martin	do	Rye whiskey; unadulterated.
A. St. André	do	Whiskey; probably watered; adulteration; doubtful.
E. A. Pinchaud	do	Rye whiskey; reduced by water; adulteration; doubtful.
P. Monnette	do	Draught gin; unadulterated.
R. Clarke.	do	Draught rum; not adulterated; but of a coarse quality, with high percentage of alcohol.
Z. Larocque	do	Draught brandy; genuine; the flavour resembling Hennessy's lower brand.
C. Benoit	do	Rye whiskey; genuine, but weak rye whiskey.
P. Desormiers	do	Scotch whiskey; unadulterated; contains a trace of fusil oil.
T. Lemoine	do	Rye whiskey; reduced with water; adulterated; doubtful.
A. Branchaud	do	Gin; unadulterated.
Francis Loughtin	do	Whiskey; probably reduced by water; adulteration; doubtful.
Wm. Armstrong	do	do reduced to some extent by water do do
David Lalonde	Valleyfield, Que.	Rye whiskey; unadulterated.
L. Gendron	do	Whiskey; probably reduced by water; adulteration; doubtful.
Vien et Frère.	do	Brandy; genuine.
Mrs. Moir	Huntingdon, Que.	Highwines; unadulterated.
do	do	Rye do
J. C. McMillen	do	Whiskey; unadulterated, but traces af fusil oil.
Jos. Campeau	St. Jerôme, Que.	do probably watered; is considerably below strength.
D. Chevrier	do	Rye; blended with common whiskey; unadulterated.
J. M. Richard & Co.	do	Brandy.

APPENDIX C.—INSPECTION OF FOOD,

MILK.

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis.				
					Water.	Total Solids.	Fat.	Solids, not Fat.	Specific Gravity
1890.					p. c.	p. c.	p. c.	p. c.	p. c.
July 15..	Dr. F. X. Valade..	Kingston...	2196	9680	85·33	14·67	5·62	9·07	....
do 15..	do ..	do ...	2197	9681	87·01	12·99	3·92	9·07	....
do 15..	do ..	do ...	2198	9682	87·11	12·89	3·79	9·10	....
do 15..	do ..	do ...	2199	9683	85·69	14·31	5·13	9·18	.....
do 15..	do ..	do ..	2200	9684	85·77	14·23	5·47	8·76	....
do 15..	do ..	do ...	3901	9685	86·66	13·34	4·41	8·93	.....
do 15..	do ..	do ...	3902	9686	86·90	13·10	3·02	10·08	....
do 15..	do ..	do ...	3903	9687	91·40	8·60	1·60	7·00	....
do 15..	do ..	do ...	3904	9688	88·45	11·55	2·85	8·70	....
do 15 .	do ..	do ...	3905	9689	86·16	13·84	4·42	9·42	....
do 15..	do ..	do ...	3906	9690	86·04	13·96	4·75	9·21	....
do 15..	do ..	do ...	3907	9691	86·73	13·27	4·05	9·22	1·0321
do 15..	do .	do ...	3908	9692	86·21	13·79	5·01	8·78	1·034
do 15..	do ..	do ...	3909	9693	87·52	12·48	3·41	9·07	......
do 15..	do ..	do ...	3910	9694	85·55	14·45	5·23	9·22	......
do 16..	do ..	do ...	3911	9695	87·34	12·66	3·63	9·03	1·0319
do 16..	do ..	do ...	3912	9696	87·17	12·83	3·74	9·09	1·0325
do 16..	do ..	do ...	3913	9697	85·70	14·30	4·63	9·67	1·0339
do 16..	do ..	do ...	3914	9698	89·06	10·94	1·43	9·51	1·0349
do 16..	do ..	do ...	3915	9699	89·98	10·02	0·98	9·04	1·0340
do 16..	do ..	do ...	3916	9700	79·85	20·15	8·91	11·24	1·0298
do 16..	do ..	do ...	3917	10101	87·98	12·02	3·15	8·87	1·0316
do 16..	do ..	do ...	3918	10102	87·76	12·24	2·83	9·41	1·0333
do 16..	do ..	do ...	3919	10103	87·41	12·59	3·33	9·26	1·0322
do 17..	do ..	do ...	3920	10104	87·72	12·28	2·98	9·30	1·034
do 17..	do ..	do ...	3921	10105	87·39	12·61	3·36	9·25	1·0331
do 17..	do ..	do ...	3922	10106	87·05	12·95	3·75	9·20	1·0319
Aug. 5..	do ..	do ...	3923	9201	87·53	12·47	3·84	8·63	1·0308
do 5..	do ..	do ...	3924	9202	86·87	13·13	3·95	9·18	1·0322
do 5..	do ..	do ...	3925	9203	86·04	13·96	5·40	8·56	1·0294
do 5..	do ..	do ...	3926	9204	87·39	12·61	4·21	8·40	1·0298
do 5..	do ..	do ...	3927	9205	87·25	12·75	4·07	8·68	1·0304
do 5..	do ..	do ...	3928	9206	87·01	12·99	4·80	8·19	1·0314
do 5..	do ..	do ...	3929	9207	87·33	12·67	4·24	8·43	1·0295
do 5..	do ..	do ...	3930	9208	85·59	14·41	5·51	8·90	1·0305
do 5..	do ..	do ...	3931	9209	86·70	13·30	4·58	8·72	1·0305
Aug. 6..	do ..	do ...	3932	9210	87·06	12·94	4·00	8·94	1·0315
do 6..	do ..	do ...	3933	9211	88·46	11·54	3·07	8·47	1·0305
do 6..	do ..	do ...	3934	9212	87·26	12·74	2·97	9.77	1·0350
do 6..	do ..	do ...	3935	9213	87·80	12·20	3·08	9·12	1·0331
do 6..	do ..	do ...	3936	9214	88·73	11·27	2·51	8·76	1·0324
do 6..	do ..	do ...	3937	9215	86·65	13·35	4·13	9·22	1·0324
do 6..	do ..	do ...	3938	9216	88·27	11·73	3·64	8·09	1·0285
do 6..	do ..	do ...	3939	9217	87·72	12·24	3·89	8·35	1·0302
do 7..	do ..	do ...	3940	9218	88·68	11·32	3·00	8·32	1·0295
do 7..	do ..	do ...	3941	9219	88·08	11·92	3·41	8·51	1·0309
do 7..	do ..	do ...	3942	9220	87·18	12·82	4·02	8·80	1·0311
do 7..	do ..	do ..	3943	9221	87·18	12·82	3·60	9·22	1·0326
do 7..	do ..	do ...	3944	9222	87·90	12·10	3·34	8·76	1·0310
do 7..	do ..	do ...	3945	9223	87·86	12·14	3·44	8·70	1·0316
do 7..	do ..	do ...	3946	9224	85·91	14·09	4·39	9·70	1·0333
do 7..	do ..	do ...	3947	9225	85·94	14·06	4·53	9·53	1·0325
do 7..	do ..	do ...	3948	9226	87·80	12·20	2·83	9·37	1·0336
do 7..	do ..	do ...	3949	9227	86·59	13·41	4·37	9·04	1·0324

DRUGS, &c.—Tabulated Statement—*Continued.*

Vendor.	Residence.	Observations.
Moses Benedict	Hull, Que	Sample curdled before analysis.
Josh. Reneau	do	do do
Josh. Merian	do	do do
Marselle Jenette	do	do do
Josh. Lentier	do	do do
Thos. Wilson	do	do do
Félix Latour	do	do do
Louis Remon	do	do do
Francis Harleau	do	do do
Henri Faubert	do	do do
Léon Cheiner	do	do do
David Lapointe	do	Not in good condition before analysis.
Honoré Normand	do	do do
Alex. Chartran	do	Curdled before analysis.
Magloire Diotte	do	do do
Wm. Bedford	Alexandria, Ont	Genuine.
D. Chisholm	do	do
A. B. McDonald	do	do
D. Urquhart	do	Skimmed.
A. Simpson	do	do
A. D. McGillivray	do	Partly cream.
D. McIntosh	do	Under average; probably watered.
D. Cameron	do	Skimmed partly.
D. A. McDonald	do	Under average.
G. Lawson	do	Partly skimmed.
H. A. Ahearns	do	Under average.
G. Millar	do	Genuine.
Wm. Hall	Cornwall, Ont	Fair.
Josh. Leschamp	do	Genuine.
Donald Coites	do	Rich milk.
J. J. Butler	do	Genuine.
Wm. Fitzgerald	do	do
B. Néré	do	do
George Bronson	do	do
Duncan Grant	do	Rich milk.
S. MacKay	do	Genuine.
John Smith	Prescott, O	Genuine.
Mrs. McKein	do	Watered.
W. S. West	do	Partly skimmed.
Alfred Presse	do	do
Comfort Whiting	do	do
James McGarr	do	Genuine.
John M. Row	do	Very probably watered.
James Hodge	Cardinal, O	Fair.
R. Prosser	do	Watered.
P. Calhoun	Morrisburgh	Under average.
R. Gibson	do	Genuine.
S. R. Slater	do	do
A. Dain	do	Under average.
Alex. Thom	do	do
Chas. B. Clark	do	Genuine.
Edgar Pruner	do	do
A. Cutler	do	Partly skimmed.
Chas. Seeley	do	Genuine.

APPENDIX C—INSPECTION OF FOOD,

SUGAR.

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis.		
					Moisture.	Glucose.	Saccharose.
1890.							
Oct. 17....	Dr. F. X. Valade.........	Kingston, Ont.....	3950	9765	3·75	6·7	85·9
do 17....	do	do	3951	9766	0·01	0·2	99·2
do 17....	do	do	3952	9767	3·14	8·9	83·8
do 17....	do	do	3953	9768	0·04	0·1	98·9
do 17....	do	do	3954	9769	3·74	6·9	87·5
do 17....	do	do	3955	9770	Trace.	Trace.	99·1
do 17....	do	do	3956	9771	3·53	8·7	84·0
do 17....	do	do	3957	9772	0·06	Trace.	99·0
do 17....	do	do	3958	9773	3·75	9·4	84·2
do 17....	do	do	3959	9774	0·03	Trace.	99·4
do 17....	do	do	3860	9775	0·04	do	97·3
do 17....	do	do	3961	9776	3·07	8·6	84·1
do 20....	do	do	3962	9777	0·06	Trace.	99·3
do 20....	do	do	3963	9778	0·46	2·3	94·3
do 20....	do	do	3964	8779	Trace.	Trace.	99·5
do 20....	do	do	3965	9780	3·6	3·5	83·7
do 20....	do	do	3966	9781	0·12	Trace.	99·0
do 20....	do	do	3967	9782	4·04	7·2	83·2

DRUGS, &c.—Tabulated Statement—*Continued.*

Vendor.	Residence.	Observations.
Cheney & Fee	Ottawa	Brown sugar, inferior quality.
do	do	White, good.
McKenna & Co	do	Brown, inferior quality.
do	do	White, good.
Thomas Martin	do	Brown, inferior.
do	do	White, good.
P. O'Connor	do	Brown, inferior.
do	do	White, good.
Wm. Ashfield	do	Brown, inferior.
do	do	White, good.
Bryson, Graham & Co	do	White lump, good.
do	do	Brown, inferior.
Bate & Co.	do	White, good.
do	do	Demarara sugar, superficially coloured.
Brown & Co	do	White, good.
do	do	Brown, inferior quality.
Goodall Bros.	do	White, good.
do	do	Brown, inferior quality.

APPENDIX C.—INSPECTION OF FOOD,

SYRUPS AND

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis. Moisture.	Glucose.	Saccharose.
1890.					p. c.	p. c.	p. c.
Oct. 19	Dr. F. X. Valade	Kingston	3968	9783	29·5	15·3	45·1
do 19	do	do	3969	9784	24·0	30·0	32·3
do 19	do	do	3970	9785	25·5	31·7	37·1
do 19	do	do	3971	9786	29·75	18·1	42·5
do 19	do	do	3972	9787	27·3	16·0	47·4
do 19	do	do	3973	9788	28·7	15·2	45·5
do 19	do	do	3974	9789	30·0	11·55	50·55
do 19	do	do	3975	9790	25·65	21·1	37·0
do 19	do	do	3976	9791	27·45	18·8	43·5
do 19	do	do	3977	9792	27·5	29·9	36·7
do 21	do	do	3978	9793	25·45	26·1	36·2
do 21	do	do	3979	9794	28 9	14·2	47·9
do 21	do	do	3980	9795	28·6	13·1	49·65
do 21	do	do	3981	9796	30 2	13·1	49·8
do 21	do	do	3982	9797	29·55	15·1	45·8
do 21	do	do	3983	9798	22·05	25·4	46·1
do 21	do	do	3984	9799	27·8	16·7	46·1
do 21	do	do	3985	9800	22·58	29·6	35·4

TEA.

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis. Moisture.	Soluble Ash.	Insoluble Ash.	Tannin as Oxalic Acid.	Extract.	Theine.
1891.					p. c.	p. c.	p. c.	p. c.	p. c.	p. c.
Jan. 2	Dr. F. X. Valade	Kingston	3986	10201	7·09	3·52	2·25	8·4	40·0	2·9
do 2	do	do	3987	10202	3·93	3·67	2·33	9·3	40·2	3·1
do 2	do	do	3988	10203	3·8	3·5	2·9	9·8	40·5	2·1
do 2	do	do	3989	10204	7·89	3·48	2·37	9·5	31·2	3·1
do 3	do	do	3990	10205	7·29	4·06	1·84	8·1	33·8	3·7
do 3	do	do	3991	10206	5·26	3·49	2·04	13·5	41·4	4·0
do 6	do	do	3992	10207	3·83	3·70	2·17	12·8	43·20	3·5
do 6	do	do	3993	10208	3·96	3·48	3·13	9·9	37·8	3·2
do 6	do	do	3994	10209	4·46	3·93	1·77	11·6	41·8	3·3
do 6	do	do	3995	10210	4·69	3·58	1·74	13·3	40·6	3·7
do 7	do	do	3996	10211	3·63	3·73	2·47	9·8	37·4	2·8
do 7	do	do	3997	10212	6·89	3·57	1·83	5·8	32·8	2·3
do 7	do	do	3998	10213	4·1	3·33	2·23	7·1	35·2	2·5
do 7	do	do	3999	10214	5·73	3·57	2·63	8·00	36·6	2·9
do 7	do	do	4000	10215	3·53	3·83	1·70	11·1	37·4	3·1
do 7	do	do	4001	10216	7·16	3·02	2·72	7·0	31·5	2 6
do 7	do	do	4002	10217	5·40	3·15	2·70	9·8	34·4	3·0
do 7	do	do	4003	10218	3·73	3·43	2·27	9·7	37·9	2·9

DRUGS, &c.—Tabulated Statement—*Continued.*

MOLASSES.

Vendor.	Residence.	Observations.
Goodall Bros.	Ottawa.	Molasses. Leaves a deposit in vessel when kept.
do	do	Syrup.
Kenny & Co	do	do
do	do	Molasses.
G. Dalglish	do	do
F. O'Malley..	do	do
Wm. York..	do	do Leaves a deposit in vessel when kept.
F. O'Malley	do	Syrup.
Wm. Madden.	do	Molasses. Leaves a deposit in bottom of jar.
do	do	Syrup.
James Little	do	do
do	do	Molasses. Deposit in bottom of jar.
Joseph Dupont..	do	do do
D. W. Charlebois	do	do do
John Casey.	do	do do
D. W. Charlebois	do	Syrup. Fine crystals of sugar in suspension and in bottom of jar.
Wm. Wall	do	Molasses.
do	do	do

Vendor.	Residence.	Observations.
F. H. Cluff.	Ottawa	Black tea. No foreign leaves; good.
do	do	Japan tea. do
J. H. Allen	do	do do
do	do	Black tea. do
E. B. Brown	do	do do
do	do	Assam tea. do
F. J. Beamish	Pembroke	Japan tea. do
S. J. Flucker	do	do do
R. Menzies	do	do do
Geo. Hollinsworth	do	Assam tea. do
S. Keadey	Arnprior, Ont.	Japan tea. do
do	do	Black tea. No foreign leaves; fair; tannin rather low.
J. F. Whyte	do	Japan tea. No foreign leaves; good.
do	do	do do
A. R. G. Peden	Carleton Place	do do
do	do	Black tea. do
J. Ducett	do	Japan tea. do
G. Graham	do	do do

APPENDIX C.—INSPECTION OF FOOD,

LIQU

Date.		Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis.					
						Specific Gravity, 15·5c.	Alcohol by Weight.	Alcohol by Volume.	Proof Spirits.	Solids.	Ash.
1891.						p. c.	p. c.	p. c.	p. c.	p. c.	p. c.
April	16..	Dr. F. X. Valade..	Kingston....	4004	10249	0·9352	42·28	49·81	87·29	1·23	0·09
do	16..	do ..	do	4005	10250	0·9438	38·44	45·71	80·11	5·83	0·06
do	16..	do ..	do	4006	10251	0·9612	29·93	36·24	63·52	11·42	0·03
do	16..	do ..	do	4007	10252	0·9452	38·08	45·35	79·47	6·08	0·07
do	17..	do ..	do	4008	10253	0 955	31·92	38 40	67·30	1·62	0·04
do	17..	do ..	do	4009	10254	0·9403	39·65	46·96	82·31	3·11	0·03
do	17..	do ..	do	4010	10255	0·9459	36·75	43·81	76·77	0·08	0·03
do	17..	do ..	do	4011	10256	0·9578	30·03	36 25	63·52	1·72	0·04
do	17..	do ..	do	4012	10257	0·9532	32·80	39·40	69·04	1·31	0·07
do	17..	do ..	do	4013	10258	0·9321	44·69	52·68	92·31	8·73	0·07
do	17..	do ..	do	4014	10259	0·9436	37·93	45·10	79·04	1·12	0·08
do	18..	do ..	do	4015	10260	0·9347	42·51	50·06	87·73	1·00	0·16
do	18..	do ..	do	4016	10261	0·9623	27·41	33·23	58·23	1·54	0·09
do	18..	do ..	do	4017	10262	0·9614	27·98	33·89	59·40	1·35	0·08
do	22..	do ..	do	4018	10263	0·9406	40·46	47·94	84·02	5·35	0·04
do	22..	do ..	do	4019	10264	0·9363	41·65	49·12	86·09	0·08	0·04
do	22..	do ..	do	4020	10265	0·9366	41·53	49·02	85·91	0·07	0·13
do	23..	do ..	do	4021	10266	0 9677	23·52	28·68	48·66	2·43	0·07
do	23..	do ..	do	4022	10267	0·9364	41·83	49·34	86·47	0·88	0·04
do	23..	do ..	do	4023	10268	0·9469	36·47	43·51	76·23	2·52	0·08
do	23..	do ..	do	4024	10269	0·9372	41·38	48·85	85 62	1·97	0·10
do	23..	do ..	do	4025	10270	0·9602	28·55	34·54	60·53	1·31	0·04
do	23..	do ..	do	4026	10271	0·9515	33·97	40·71	71·36	3·39	0·06

DRUGS, &c.—Tabulated Statement.—*Continued.*

ORS.

Vendor.	Residence.	Observations.
S. Horey..........	Trenton....	Irish whiskey; a strong spirit; very doubtful as to presence of fusil oil; contains traces of tannin.
A. M. Spafford...	do ...	Rum; contains a strong spirit; caramel; traces of metal and tannin.
T. H. Vanalton....	do	Malt whiskey; contains sugar; presence of cayenne doubtful; adulterated.
T. Stortz....	do	Ancient whiskey; adulterated; aromatised with sugar and cinnamon and casia; contains traces of metal, a strong spirit.
J. McParland.....	Kingston...	Rye whiskey; adulterated; contains caramel; traces of tannin and metal; a weak spirit.
do	do ...	Malt whiskey; adulterated; contains sugar and traces of metals; presence of cayenne doubtful.
T. Farrell	do ...	Gin; contains traces of metals and sulphate; a strong spirit.
do	do ...	Brandy; adulterated; a weak spirit; contains traces of tannin of metals and sulphate.
J. E. Dunham....	do ...	Rye whiskey; adulterated; deficient in alcohol; contains caramel, traces of metals and tannin.
W. J. McHenrv & Bros............	Brockville..	Rum; contains caramel, traces of tannin and metal; a strong spirit.
do ..	do ..	Scotch whiskey; contains traces of sulphates of tannin and metals; a strong spirit.
H. T. Fitzsimmons & Bros..........	do ..	Irish whiskey; contains traces of metals of tannin and sulphate; a strong spirit.
Mr. McGlade.....	do ..	Rye whiskey; adulterated; contains caramel; traces of sulphates of metal and tannin; a weak spirit.
A. Wendling.....	do ..	Rye whiskey; adulterated; a weak spirit; contains traces of metals, tannin and sulphate.
P. O'Connor ...	Ottawa.....	Brandy; adulterated; a strong spirit; contains sugar, traces of metals and of tannin.
do	do	Gin; contains traces of metals and sulphate; a strong spirit.
F. Satchell.......	do	Irish whiskey; a strong spirit; contains traces of metals, tannin and sulphate.
L. Quinn..........	do	Rye whiskey; adulterated; deficient in strength; contains caramel, traces of metals and tannin.
do	do	Scotch whiskey; traces of tannin and of metals; a strong liquor.
P. Baskerville & Bros......... ...	do	Rye whiskey; contains caramel; traces of metals and tannin; a strong spirit.
W. Wall..........	do	Islay whiskey; contains traces of metals of tannin and sulphates; a strong spirit.
M. Quinn...	do	Rye whiskey; adulterated; deficient in alcohol; contains caramel; traces of metal and tannin.
C. Perron........	do	Rye whiskey; adulterated; deficient in alcohol; contains caramel, traces of metals of tannin and sulphates.

APPENDIX C.—INSPECTION OF FOOD,

MILK

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Samples.	Result of Analysis.			
					Water.	Fat.	Other Solids.	Total Solids.
1890.					p. c.	p. c.	p. c.	p. c.
Aug. 21..	Dr. W. H. Ellis	Toronto	2739	9701	86·96	3·26	9·79	13·05
do 21..	do	do	2740	9702	86·87	2·86	10·27	13·13
do 21..	do	do	2741	9703	87·69	2·54	9·97	12·31
do 21..	do	do	2742	9704	85·97	4·79	9·24	14·03
do 21..	do	do	2743	9705	86·87	2·88	10·25	13·13
do 21..	do	do	2744	9706	86·61	3·42	9·97	13·39
do 21..	do	do	2745	9707	88·07	3·93	8·00	11·93
do 23..	do	do	2746	9708	87·13	3·96	8·91	12·87
do 23..	do	do	2747	9709	87·01	4·40	8·59	12·99
do 23..	do	do	2748	9710	86·93	3·50	9·57	13·07
do 23..	do	do	2749	9711	88·89	2·58	9·13	11·71
do 23..	do	do	2750	9712	88·10	2·61	9·29	11·90
do 25..	do	do	2751	9713	88·02	2·30	9·69	11·98
do 25..	do	do	2752	9714	88·20	2·18	9·62	11·80
do 25..	do	do	2753	9715	88·72	1·49	9·79	11·28
do 25..	do	do	2754	9716	87·51	3·01	9·48	12·49
do 25.	do	do	2755	9717	87·45	3·63	8·92	12·55
do 25..	do	do	2756	9718	86·99	4·10	8·90	13·01
do 25..	do	do	2757	9719	85·86	4·03	10·11	14·14
do 25..	do	do	2758	9720	86·40	6·65	6·95	13·60
do 26..	do	do	2759	9721	85·33	4·56	10·11	14·17
do 26..	do	do	2760	9722	86·07	4·43	9·50	13·93
do 26..	do	do	2761	9723	86·69	3·86	9·45	13·31
do 26..	do	do	2762	9724	87·63	3·57	8·80	12·37
do 26..	do	do	2763	9725	84·55	4·74	10·71	15·45
do 26..	do	do	2764	9726	87·45	3·84	9·71	12·55
do 26..	do	do	2765	9727	......	......	......	......
do 26..	do	do	2766	9728	85·00	3·77	11·24	15·00
do 26..	do	do	2767	9729	85·44	4·06	10·51	14·56
do 26..	do	do	2768	9730	87·51	3·63	8·86	12·49
do 26..	do	do	2769	9731	88·38	3·72	7·90	11·62
do 26..	do	do	2770	9732	86·44	3·28	10·23	13·56
do 27..	do	do	2771	9733	84·95	3·87	11·18	15·05
do 27..	do	do	2772	9734	87·34	3·12	9·54	12·66
do 27..	do	do	2773	9735	89·17	0·28	10·55	10·83
do 27..	do	do	2774	9736	89·77	1·95	8·28	10·23
do 27..	do	do	2775	9737	87·63	3·34	9·03	12·37
do 27..	do	do	2776	9738	85·57	4·13	10·30	14·43
do 27..	do	do	2777	9739	89·61	1·42	8·97	10·39
do 28..	do	do	2778	9740	88·77	2·26	8·97	11·23
do 28..	do	do	2779	9741	89·87	1·93	8·20	10·13
do 28..	do	do	2780	9742	85·44	4·60	9·96	14·56
do 28..	do	do	2781	9743	......	1·93	8·78	10·71
do 28..	do	do	2782	9744	86·82	3·04	10·14	13·18
do 28..	do	do	2783	9745	89·75	1·73	8·52	10·25
do 28..	do	do	2784	9746	84·64	7·32	8·04	15·36
do 28..	do	do	2785	9747	89·30	1·54	9·16	10·70
do 28..	do	do	2786	9748	87·74	1·59	10·67	12·26
do 28..	do	do	2787	9749	89·77	0·94	9·29	10·23
do 28..	do	do	2788	9750	86·25	4·22	9·53	13·75
do 28..	do	do	2789	9751	87·80	4·19	8·01	12·20
do 28..	do	do	2790	9752	87·92	3·88	8·20	12·08
do 30..	do	do	2791	9753	87·67	3·17	9·16	12·38
do 30..	do	do	2792	9754	89·38	3·28	7·34	10·62
do 30..	do	do	2793	9755	87·63	2·40	9·97	12·37

DRUGS, &c.—Tabulated Statement—*Continued.*

Vendor.	Residence.	Observations.
Wm. Head	Smith Tp., Peterborough	Genuine.
Mrs. Sutherland	Simcoe St. do	Below average average as to butter fat.
Mrs. Lynn	Peterborough	Poor in cream.
T. Hooper	do	Genuine.
H. Long	do	Poor in cream.
J. C. Craig	do	Genuine.
Wm. Denoon	From Ashburnham	Poor in solids, but badly curdled; probably genuine.
Mrs. S. Dormer	Lindsay	Genuine.
T. S. Williams	do	do
Andrew Brown	do	do
J. Guiry	do	Poor in butter fat.
Mrs. C. Jewett	do	Poor in cream.
D. Gillespie	Beaverton	Poor in fat.
A. Hamilton	do	Very poor in fat.
Wm. White	do	Adulterated by removal of part of the cream.
T. Treveler	do	Genuine.
D. C. Campbell	do	do
H. Pethrick	Orillia	do
P. Cuddabee	do	do
Mrs. Wright	do	Very rich in fat and low in other solids; probably mixed with cream.
James Howe	do	Genuine.
R. M. Pettit	do	do
Mrs. Davis	do	do
Mrs. Donaldson	do	do
Mr. Vanderburg	do	do
T. Johnson	Barrie	do
John Goodfellow	do	do
Wm. Caldwell	do	do
S. Dyment	do	do
W. Ainley	do	do
P. Cavanagh	do	Adulterated by admixture with water.
Mrs. W. Chapell	do	Genuine.
Mrs. W. Collins	Bradford	do
P. Chapelle	do	do
Mrs. Archer	do	Adulterated by removal of cream.
Mrs. Coutes	do	do either by removal of cream or addition of water.
Mr. S. Lukes	do	Genuine.
Mr. G. Brown	do	do
Mr. B. Stewart	do	Adulterated by abstraction of cream.
R. Millard	Newmarket	Poor in cream, probably skimmed.
Mrs. Wright	do	Adulterated by abstraction of cream.
J. Cocksedge	do	Genuine.
Mrs. Tienhelder	do	Adulterated by abstraction of cream.
C. Lundy	do	Genuine.
John Ough	do	Adulterated by abstraction of cream.
Mrs. Manning	do	Cream.
R. Wells	Aurora	Adulterated by abstraction of cream.
Mr. Lyons	do	do do
Mr. Robinson	do	do do
R. Lawson	do	Genuine.
W. Scott & Sons	do	Probably genuine; the solids not fat are low, but the milk was badly curdled.
Mr. C. Donan	do	Poor in solids not fat.
W. Findlay	Toronto	Genuine.
R. J. Coburn	do	Adulterated by admixture with water.
C. D. Growhurst	do	Poor in fat.

APPENDIX C.—INSPECTION OF FOOD,

MILK—

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis.			
					Water.	Fat.	Other Solids.	Total Solids.
1890.					p. c.	p. c.	p. c.	p. c.
Aug. 30..	Dr. W. H. Ellis.	Toronto	2794	9756	89·08	3·08	7·84	10·92
do 30..	do	do	2795	9757	....	2·83	7·77	10·60
do 30..	do	do	2796	9758	....	3·24	8·98	12·22
do 30..	do	do	2797	9759	88·31	3·20	8·49	11·69
do 30..	do	do	2798	9760	89·75	1·73	8·52	10·25
do 30..	do	do	2799	9761	87·65	2·60	9·75	12·35
do 30..	do	do	2800	9762	89·17	2·25	8·58	10·83
do 30..	do	do	2602	9763	88·39	3·10	8·51	11·61
do 30..	do	do	2603	9764	87·48	3·11	9·41	12·52
Nov. 10..	do	do	2604	10401	84·61	6·52	8·85	15·08
do 10..	do	do	2605	10402	86·77	3·57	9·65	13·22
do 10..	do	do	2606	10403	87·28	4·32	8·39	12·72
do 10..	do	do	2607	10404	88·78	3·99	7·22	11·21
do 10..	do	do	2608	10405	84·95	6·48	8·56	15·04
do 11..	do	do	2609	10406	86·94	4·12	8·93	13·05
do 11..	do	do	2610	10407	87·20	4·53	8·26	12·79
do 11..	do	do	2611	10408	87·44	4·03	8·51	12·55
do 11..	do	do	2612	10409	85·52	5·68	8·79	14·47
do 11..	do	do	2613	10410	86·61	5·24	8·14	13·38
do 11..	do	do	2614	10411	88·05	4·08	7·85	11·94
do 11..	do	do	2615	10412	86·05	4·97	8·97	13·94
do 11..	do	do	2616	10413	86·62	4·09	9·27	13·37
do 11..	do	do	2617	10414	86·73	4·39	8·87	13·26
do 11..	do	do	2618	10415	88·16	3·78	8·04	11·83
do 11..	do	do	2619	10416	87·08	4·17	8·74	12·91
do 13..	do	do	2631	10428	87·84	3·69	8·45	12·15
do 13..	do	do	2632	10429	91·03	1·69	7·27	8·96
do 14..	do	do	2633	10430	89·49	3·11	7·88	10·50
do 14..	do	do	2634	10431	87·70	3·82	8·47	12·29
do 14..	do	do	2635	10432	87·87	3·98	8·14	12·12
do 14..	do	do	2636	10433	87·46	3·62	8·91	12·53
do 14..	do	do	2637	10434	88·31	3·18	8·49	11·68
do 14..	do	do	2638	10435	88·83	3·62	7·54	11·16
do 14..	do	do	2639	10436	87·20	4·14	8·64	12·79
do 14..	do	do	2640	10437	87·99	3·82	8·18	12·00
do 14..	do	do	2641	10438	88·33	3·89	7·77	11·67
do 14..	do	do	2642	10439	87·03	4·27	8·69	12·97
do 14..	do	do	2643	10440	88·20	3·26	8·53	11·79
do 25..	do	do	2644	10441	88·14	3·86	8·99	12·85
do 25..	do	do	2645	10442	86·72	3·90	9·36	13·27
do 25..	do	do	2646	10443	87·59	3·50	8·90	12·40
do 25..	do	do	2647	10444	87·70	3·28	9·01	12·29
do 25..	do	do	2648	10445	85·91	4·52	9·55	14·08
do 25..	do	do	2649	10446	88·54	3·02	8·42	11·45
do 25..	do	do	2650	10447	87·35	3·55	9·08	12·64
do 25..	do	do	....	10448	....	....	....	....
do 26..	do	do	2652	10449	87·32	3·82	8·84	12·67
do 26..	do	do	2653	10450	87·29	3·73	8·96	12·70
do 26..	do	do	2654	10451	87·68	3·27	9·03	12·31
do 26..	do	do	2655	10452	87·24	3·68	9·07	12·75
do 27..	do	do	2656	10453	84·95	5·30	9·74	15·04
do 27..	do	do	2657	10454	87·87	3·39	8·73	12·12
do 27..	do	do	2658	10455	85·72	5·37	8·90	14·27
do 27..	do	do	2659	10456	84·76	3·38	9·85	13·24
do 27..	do	do	2060	10457	87·23	3·42	9·33	12·76
do 28..	do	do	2661	10458	85·73	4·93	9·32	14·26
do 28..	do	do	2662	10459	86·94	3·87	9·18	13·05
do 28..	do	do	2663	10460	87·45	3·98	8·56	12·54

DRUGS, &c.—Tabulated Statement—*Continued.*

Continued.

Vendor.	Residence.	Observations.
A. Alexander	Toronto	Adulterated by admixture with water.
Downley Bros	do	do do
T. Forsyth	do	Genuine.
A. Hopkins	do	do
Wm. McColl	do	Adulterated by abstraction of cream.
W. McFarlane	do	Poor in cream.
A. J. Harrison	do	do probably skimmed.
Fred. Sole	do	Genuine.
R. A. Hardy	do	do
James Moore	do	Exceptionally rich in fat.
Chas. W. Couplan	do	Genuine.
Arch. Crone	do	Below the average as to solids not fat.
Wesley Judge	Lucan	Adulterated by admixture with water.
John Hodgins	do	Very rich in fat.
George Hillin	Sarnia	Genuine.
Charles Derby	do	Below average as to solids not fat.
Wm. Battle	do	Genuine.
George Carr	Sarnia, Ont	Genuine.
Miss G. Ethner	do	do
James Carr	do	Adulterated by admixture with water.
Peter McCulloch	do	Genuine.
G. B. Windorer	Petrolia, Ont	do
Wm. Drew	do	do
Simon Baker	do	Below average as to solids not fat.
D. McVicar	do	Genuine.
W. Swaiscand	Glencoe, Ont	Below average as to solids not fat.
James McNeill	do	Adulterated by admixture with water.
John Lyle	St. Thomas, Ont	do do
Henry Dunsfore	do	Genuine.
John Y. Small	do	Below average as to solids not fat.
Fred. Clarke	do	Genuine.
David Gooding	do	Below average as to solids not fat.
Benj. Mann	do	Adulterated by admixture with water.
Jos. Hatch	do	Genuine.
Charles Siple	do	Below average as to solids not fat.
F. A. Fitch	do	Adulterated by admixture with water.
Chas. Hopkins	do	Genuine.
John Axford	do	Below average as to solids not fat.
W. W. Kenny	Guelph, Ont	Genuine.
John Robinson	do	do
George Bracy	do	do
W. J. Seharis	do	Below average as to fat.
Selina Bostwick	do	Genuine.
Jos. Rydell	do	Below average as to solids not fat.
Elizabeth Pender	do	Genuine.
John Billings	do	Sample destroyed.
Peter A. Robb	Palmerston, Ont	Genuine.
Christopher Batty	do	do
Mrs. John Sewell	do	Below average as to fat.
A. W. Cusack	do	Genuine.
Jas. L. Collis	Mount Forest, Ont	do
Jas. S. Wood	do	Below average as to fat.
John McCall	do	Genuine.
John Deacon	Mount Forest	Below average as to fat.
Mrs. Cath. O'Donnell	do	do
Harvey Laberty	Orangeville	Genuine.
Noble Wright	do	do
John Rusk	do	do

APPENDIX C.—INSPECTION OF FOOD,

MILK –

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Samples.	Result of Analysis.			
					Water.	Fat.	Other Solids.	Total Solids.
1890.					p. c.	p. c.	p. c.	p. c.
Nov. 28..	Dr. W. H. Ellis.......	Toronto	2664	10461	85·82	7·66	6·50	14·17
do 28..	do	do	2665	10462	86·06	4·60	9·33	13·93
do 28..	do	do	2666	10463	84·94	5·67	9·38	15·06
Dec. 2..	do	do	2667	10464	88·63	2·60	8·76	11·37
do 2..	do ...	do	2668	10465	88·64	2·51	8·84	11·35
do 2..	do	do	2669	10466	84·33	5·79	9·87	15·66
do 2..	do	do	2670	10467	88·42	0·78	10·79	11·57
do 3..	do	do	2671	10468	87·01	4·14	8·83	12·98
do 3..	do	do	2672	10469	86·34	4·35	9·30	13·66
do 3..	do	do	2673	10470	85·67	4·83	9·48	14·32
do 3..	do	do	2674	10471	86·51	3·98	9·50	13·48
do 3..	do	do	2675	10472	85·95	4·53	9·51	10·04
do 3..	do	do	2676	10473	84·71	5·85	9·43	15·28
do 3..	do ...	do	2677	10474	85·98	5·12	8·88	14·01
do 3..	do	do	2678	10475	86·71	4·05	9·23	13·28
do 3..	do	do	2679	10476	85·25	7·08	7·65	14·74
do 3..	do	do	2680	10477	86·67	4·43	8·89	13·32
do 3..	do	do	2681	10478	86·43	4·17	9·39	13·56
do 5..	do	do	2682	10479	87·92	2·41	9·66	12·07
do 5..	do ...	do	2683	10480	86·33	4·15	9·51	13·66
Nov. 12..	do	do	2620	10417	87·02	3·93	9·04	12·97
do 12..	do	do	2621	10418	88·06	3·54	8·38	11·93
do 12..	do	do	2622	10419	86·56	4·57	8·86	13·43
do 13..	do	do	2623	10420	88·47	4·56	6·95	11·52
do 13..	do	do	2624	10421	88·43	2·77	8·79	11·57
do 13..	do ..	do	2625	10422	....	......	....	....
do 13..	do	do	2626	10423	88·32	2·88	8·79	11·67
do 13..	do	do	2627	10424	87·48	4·11	8·40	12·51
do 13..	do	do	2628	10425	88·20	3·36	8·42	11·79
do 13..	do	do	2629	10426	87·76	4·08	8·14	12·23
do 13..	do	do	2630	10427	89·66	3·22	7·11	10·33

DRUGS, &c.—Tabulated Statement—*Continued.*

Continued.

VENDOR.	Residence.	Observations.
Charles Crokett	Orangeville	Adulterated by the addition of water; cream has also been added.
Wm. P. King	do	Genuine.
Ed. Clarke	do	do
R. W. Tuck	Shelburne	Below average in butter fat and solids.
Alexander Reed	do	do do
Joseph Brundage	do	Genuine.
Mrs. Robt. McKay	do	Adulterated by the abstraction of cream.
Robt. Young	Owen Sound	Genuine.
Alex. McDonald	do	do
George Mervyn	do	do
Alfred Wilson	do	do
James Bruce	do	do
Wm. Harding	do	do
Peter Deshane	do	do
James Buckly	do	do
James Douglas	do	Above the average in fat and below as to solids not fat.
G. A. Sargent	do	Genuine.
Henry Kennedy	do	do
Eliza A. Carmichael	Alliston	Below average as to fat.
Wm. S. Wallace	do	Genuine.
Ben Madden	Dresden	do
John and Isaac Jeffs	do	Below average as to solids not fat.
Mrs. J. A. Hanning	do	Genuine.
Edward Kahne	Chatham	Adulterated by admixture with water.
Robt. House	do	Poor in fat and also skimmed.
Abraham Huff	do	Sample destroyed.
Frank Cartier	do	Below average as to fat.
Sarah Siddell	do	do
Thos. Smith	do	do
Thos. W. W. Fenton	do	Below average as to solids not fat.
Wm. A. Norton	do	Adulterated by admixture with water.

APPENDIX C.—INSPECTION OF FOOD,

COF

Date.		Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Samples.	Result of Analysis. Moisture.	Total.	Soluble.	Insoluble.	Caffeine.	Specific Gravity.
1890.						p. c.	p. c.	p. c.	p. c.	p. c.	p. c.
Jany.	8	Dr. W. H. Ellis	Toronto ..	2684	9330	3·00	5·213	4·052	1·005	1·125	1·01056
do	8	do ..	do ..	2685	9331	3·60	4·20	2·51	1·69	0·87	1·01819
do	8	do ..	do ..	4538	9332	2·80	4·33	3.23	1·10	0·97	1·012
do	8	do ..	do ..	2687	9333	3·15	3·58	1 96	1·62	0·72	1·01450
do	8	do ..	do ..	2688	9334	3·01	3·91	2·91	1·00	1·52	1·0112
do	8	do ..	do ..	2689	9335	3·69	3·36	2·19	1·17	0·35	1·0167
do	21	do ..	do ..	4502	9348	5·67	4·37	3·41	0·96	1·32	1·015
do	21	do ..	do ..	4503	9349	3·68	3·80	2·60	1·20	0·67	1·015
do	21	do ..	do ..	4504	9350	5·42	3·30	2·10	1·20	0·34	1·016
do	21	do ..	do ..	4505	9351	3·99	4·03	3·10	0·93	1·02	1·011
do	21	do ..	do ..	4506	9352	4·33	3·65	2·47	1·18	0·62	1·016
do	21	do ..	do ..	4507	9353	3·18	4·23	3·42	0·81	1·16	1·010
do	14	do ..	do ..	2690	9336	3·27	4·88	3·41	1·47	1·25	1·011
do	14	do ..	do ..	2691	9337	3·86	3·65	2·62	1·03	0·51	1·016
do	14	do ..	do ..	2692	9338	4·92	3·78	2·65	1·13	0·66	1·016
do	15	do ..	do ..	2693	9339	3·11	4·00	3·19	0·81	1·38	1·0107
do	15	do ..	do ..	2694	9340	2·72	4·30	3·53	0 76	1·25	1·012
do	15	do ..	do ..	2695	9341	2·77	4·03	3·22	0·81	1·45	1·010
do	15	do ..	do ..	2696	9342	4·61	4·13	3·03	1·10	1·41	1·012
do	15	do ..	do ..	2697	9343	5·72	3·85	2·60	1·25	0·85	1·015
do	15	do ..	do ..	2698	9344	3·33	4·18	3·34	0·83	0·90	1·018
do	16	do ..	do ..	2699	9345	2·80	4·53	3·70	0·83	1·32	1·010
do	16	do ..	do ..	2700	9346	3·13	4·81	3·53	1·28	1·05	1·012
do	16	do ..	do ..	4501	9347	2·95	4·25	3·61	0·64	1·25	1·106

DRUGS, &c.—Tabulated Statement—*Continued.*

FEE.

Sugar.	Vendor.	Residence.	Observations.
p. c.			
.....	Wm. Cassellman.....	Montreal.....	No foreign substances present; pure coffee.
1·25	Edmond & Belhumeur	do	Peas, flour and chicory present; adulterated.
.....	do ..	do	Adulterated by admixture with chicory.
...	Joseph Audet........	do	do do peas.
1·25	N. Plante	do	do do peas.
1·25	do	do	do do chicory and farinaceous matter.
1·25	Henri Sarrazin.......	Berthier......	Pure.
1·25	N. L. Caisse	do	Adulterated by admixture with chicory and farinaceous matter.
1·25	L. Giroux	do . ..	
1·25	L. A. Ricard........	Three Rivers..	Adulterated by the addition of farinaceous matter.
1·25	Philip Jardain.. ...	do ..	do admixture with chicory and farinaceous matter.
1·25	Thos. Bournival......	do ..	Pure; no foreign substance.
1·25	L. Mabeau......... .	Arthabaska...	Adulterated by admixture with chicory.
1·25	Hector Gaudet. . . .	do ...	do do and farinaceous food.
1·25	H. H. Guay..........	do ...	do do do
1·25	J. Sutcliffe.	Levis	Pure.
1·25	G. Lambert.........	do	Adulterated by admixture with chicory.
1·25	L. H. Begin..........	do	Pure; no foreign substance.
1·25	Ed. Clark......	Quebec.......	Adulterated by admixture with chicory.
1·25	do	do	do do and farinaceous substances.
1·25	Felix Lavoie.........	do	do do
1·25	N. Binet.............	do	Pure; no foreign substance.
1·25	David Water...... ...	do	Adulterated by admixture with chicory.
1·25	J. B. Rousseau.......	do	Pure; no foreign substance.

APPENDIX C—INSPECTION OF FOOD,

LIQUORS

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis.		
					Absolute Alcohol by Weight at 15·5° C.	Specific Gravity at 15·5° C.	Solid Grains at 100° C.
1891.					p. c.	p. c.	p. c.
April 9	Dr. W. H. Ellis	Toronto	4508	10219	52·0	·9379	......
do 9	do	do	4509	10220	22·08	·9690	0·18
do 9	do	do	4510	10221	39·09	·9405	0·06
do 9	do	do	4511	10222	31·00	·9561	0·11
do 9	do	do	4512	10223	41·00	·9379	0·02
do 9	do	do	4513	10224	41·00	·9390	0·22
do 10	do	do	4514	10225	12·62	1·0181	8·97
do 10	do	do	4515	10226	33·00	·9549	0·19
do 10	do	do	4516	10227	21·62	9694	0·08
do 10	do	do	4517	10228	36·00	·9475	0·09
do 13	do	do	4518	10229	33·76	·9502	0·16
do 13	do	do	4519	10230	33·28	·9525	0·11
do 13	do	do	4520	10231	35·56	·9448	0·24
do 13	do	do	4521	10232	37·99	·9375	0·08
do 13	do	do	4522	10233	12·15	1·0906	28·08
do 13	do	do	4523	10234	32 17	......	......
do 13	do	do	4524	10235	31·87	·9514	0·14
do 13	do	do	4525	10236	29·48	·9549	0·10
do 13	do	do	4526	10237	15·25	·9938	3·58
do 13	do	do	4527	10238	12·13	1·0127	5·76
do 14	do	do	4528	10239	30·53	·9545	0·44
do 14	do	do	4529	10240	36·46	·9440	0·02
do 14	do	do	4530	10241	75·11	·8216	0·07
do 14	do	do	4531	10242	34·89	·9475	0·10
do 15	do	do	4532	10243	32·86	·9510	0·22
do 15	do	do	4533	10244	57·81	·8770	0·73
do 15	do	do	4534	10245	38·22	·9379	0·25
do 15	do	do	4535	10246	37·56	·9386	0·08
do 15	do	do	4536	10247	41·11	·8236	0·06
do 15	do	do	4537	10248	75·19	·8236	0·06

DRUGS, &c.—Tabulated Statement—*Continued.*

Vendor.	Residence.	Observations.
W. H. Maxwell	Toronto	Rum.
do	do	Rye whiskey.
do	do	Gin.
do	do	Malt whiskey.
Wm. Armstrong	do	Scotch do
Alex. Wood	do	Irish do
F. P. Brazill & Co	do	Port wine.
do	do	Rye whiskey.
I. M. Thomson	do	Malt do
W. A. Minn	do	White wheat whiskey.
H. Crozier	Orangeville, Ont	Rye whiskey.
J. Longeway	do	do
VIM do	do	Brandy.
J. M. Bennett	do	Irish whiskey.
do	do	Ginger wine.
R. N. Tuck	Shelburne, Ont	Rye whiskey.
do	do	Malt do
Geo. Gillespie	do	Rye do
John Witters	do	Sherry wine.
do	do	Port do
T. Macomb	Brampton, Ont	Malt whiskey.
do	do	Gin.
R. H. Hodgson	do	Sample destroyed.
Chas. Kenny	do	Rye whiskey.
M. Finigan	Oshawa, Ont	Malt do
J. W. Ray	do	Rum.
P. Creighton	do	Scotch whiskey.
Simpson & Read	Port Hope	Irish do
A. A. Adams	do	Brandy.
R. Deyell	do	High wines (alcohol).

APPENDIX C—INSPECTION OF FOOD

DRUGS

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis. Specific Gravity	Vendor.
1890.					p. c.	
Dec. 18	F. T. Harrison	London, Ont.	6001	9312	84·34 84·30	Wallace Dawson
do 18	do	do	6010	9313	·9941 ·9937	T. J. Lyons
do 18	do	do	6011	9314	·9971 ·9971	do
do 18	do	do	6002	9315	·8580 ·8583	do
do 18	do	do	6003	9316	·8398 ·8397	Laviolette & Nelson
do 18	do	do	6004	9317	·8498 ·8501	A. Robert
do 18	do	do	6012	9318	·9973 ·9976	Laviolette & Nelson
do 19	do	do	6013	9319	·9980 ·9980	A. Robert
do 19	do	do	6005	9320	·8485 ·8485	H. A. Gray
do 19	do	do	6014	9321	·9968	do
do 22	do	do	6006	9322	·8822 ·8823	Chas. E. Scarff
do 22	do	do	6007	9323	·8437 ·8435	W. A. Dyer & Co.
do 23	do	do	6015	9324	·9974 ·9967	Kerry, Watson & Co.
do 23	do	do	6016	9325	·9980	Lyman & Sons
do 23	do	do	6008	9326	·8556 ·8563	John Lewis
do 23	do	do	6017	9327	1·0000 ·9991	Kenneth Campbell
do 23	do	do	6018	9328	·9967 ·9967	do
do 23	do	do	6009	9329	·9295 ·9296	do

DRUGS, &c.—Tabulated Statement—*Continued.*

Residence.	Observations.
Montreal	Sweet spirits of nitre. Free from excess of aldhyde; good, but contains excess of acid.
do	Hydrocyanic acid. Pure.
do	do It contains no sulphuric, hydrochloric or foreign acid; deficient in strength.
do	Sweet spirits of nitre. Deficient in strength and contains excess of acid.
do	do Good, but contains excess of acid.
do	do Practically worthless, being almost entirely devoid of nitrous ether.
do	Hydrocyanic acid. Deficient in strength.
do	do do
do	Sweet spirits of nitre. Deficient in strength and contains excess of acid.
do	Hydrocyanic acid. Pure and of full strength.
do	Sweet spirits of nitre. Very deficient in strength of nitrous ether, also of alcohol, and contains excess of acid.
do	Sweet spirits of nitre. Good, but contains excess of acid.
do	Hydrocyanic acid. Pure.
do	do Deficient in strength.
do	Sweet spirits of nitre. Deficient in strength of nitrous ether, and has excess of acid.
do	Hydrocyanic acid. Deficient in strength and contains hydrochloric acid.
do	do It is labelled "Scheele's Acid;" it contains hydrochloric acid, but does not contain the per cent of Scheele's acid stated on label.
do	Sweet spirits of nitre. Entirely devoid of nitrous ether, and is diluted with water.

APPENDIX C.—INSPECTION OF FOOD,

LIQUORS.

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis.			
					Specific Gravity, 60° F.	Alcohol by Weight.	Total Solids Dried at 100° C.	Ash.
1891.					p. c.	p. c.	p. c.	p. c.
April 13....	F. T. Harrison....	London, Ont......	6019	10481	·9537 ·9537	34·01 34·01	·490	·0076
do 13....	do	do	6020	10482	·9470 ·9470	37·00 36·87	·246	·0037
do 13....	do	do	6021	10483	·9485 ·9484	35·60 35·40	·028	·0028
do 14....	do	do	6022	10484	·9565 ·9565	30·61 30·61	·147	·0076
do 14....	do	do	6023	10485	·9620 ·9621	34·41 34·41	2·784	·0115
do 14....	do	do	6024	10486	·9944 ·8945	.... 61·00	·536	·0016
do 14....	do	do	6025	10487	.9601 ·9601	28·32 28·32	·096	·0019
do 14....	do	do	6026	10488	·9351 ·9351	42·88 42·88	·392	·0018
do 15....	do	do	6027	10489	·9482 ·9482	36·32 36·32	·132	·0019
do 15....	do	do	6028	10490	·9481 ·9481	36·08 35·90	·075	·0028
do 15....	do	do	6029	10491	·9213 ·9214	48·78 48·77	·036	·0028
do 16....	do	do	6030	10492	·9560 ·9560	31·09 31·09	·105	·0019
do 16....	do	do	6031	10493	·9570 ·9569	30·39 30·39	·028	·0009
do 16....	do	do	6032	10494	·9415 ·9415	39·55 39·55	·112	·0037
do 16....	do	do	6033	10495	·9480 ·9477	36·30 36·12	·132	·0037
do 17....	do	do	6034	10496	·9475 ·9471	36·34 36·25	·104	·0037
do 17....	do	do	6035	10497	·9266 ·9265	46·43 46·42	·125	·0027
do 17....	do	do	6036	10498	·9477 ·9476	36·12 36·12	·104	·0009
do 17....	do	do	6037	10499	·9537 ·9537	32·60 32·61	·013	·0009
do 18....	do	do	6038	10500	·9199 ·9198	51·73 51·73	1·517	·0045
do 18....	do	do	6039	10501	·9456 ·9455	37·61 37·61	·151	·0009
do 18....	do	do	6040	10502	·9510 ·9514	34·25 34·25	·095	·0027
do 18....	do	do	6041	10503	·9480 ·9480	36·56 36·56	·142	·0019

DRUGS, &c.—Tabulated Statement—*Continued.*

Vendor.	Residence.	Observations.
Richard Bell	Clinton, Ont	Rye whiskey; I found none of the poisonous alkaloids and metals referred to in the schedule, no methylated alcohol and not more than a trace of amyl alcohol.
Jos. Keter	do	Brandy do do
Chas. Spooner	do	Malt whiskey; I found none of the poisonous alkaloids or metals referred to in the schedule, no added methylated or amyl compound.
James Scott	Woodstock, Ont.	Magnolia Whiskey; I found none of the poisonous alkaloids or metals referred to in the schedule, and not more than a trace of amyl compounds.
Nesbitt Bros	do	Tom gin; I find none of the poisonous alkaloids or metals referred to in the schedule, no methylated compound, but heavy traces of amyl alcohol.
W. M. Mulligan	do	Rum do do
Wm. Rice	do	Rye do do
L. A. Gunnet	do	Brandy do do
W. J. Coker	Seaforth, Ont	Rye whiskey do do
Nicholas Brady	do	Malt whiskey; I find no more than a trace of amyl alcohol, no methylated compounds, and none of the poisonous alkaloids or metals referred to in schedule.
Chs. Dalle	do	Gin; I find distinct traces of amyl alcohol, no methylated compounds, and none of the poisonous alkaloids or metals referred to in the schedule.
Jas. H. Crutting	Simcoe, Ont	Rye whiskey do do
B. W. Power	do	Malt do do do
John Sutton	do	Brandy; I did not find any of the poisonous alkaloids or metals referred to in the schedule, or any methylated or amyl compounds.
do	do	Rye whiskey do do
Saml. Hart	Glencoe, Ont	do I find none of the poisonous alkaloids or metals referred to in the schedule, no methylated alcohol, and not more than a trace of amyl alcohol.
R. R. McKellar	do	Gin do do
W. H. Simpson	do	Rye whiskey; I find none of the poisonous alkaloids or metals referred to in schedule, nor added methylated or amyl alcohol.
D. McCrea	do	Malt whiskey; I find no alkaloids or metals referred to in the schedule, no methylated or amyl alcohol.
Edward Mara	Lucan, Ont	Brandy; I did not find any of the alkaloids or metals referred to in the schedule, no methylated and a trace of amyl compound.
do	do	Rye whiskey; I failed to find any poisoning alkaloids or metals referred to in schedule, no methylated or amyl compound added.
Robt. McLean	do	Malt whiskey do do
Ralph O'Neill	do	Rye whiskey; I failed to find any of the poisonous alkaloids or metals referred to in the schedule, or any added methylated or amyl compounds.

APPENDIX C.—INSPECTION OF FOOD,

LARD.

Date.	Name of Analyst	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis.				
					Water.	In-soluble.	Siver Test.	Specific Gravity.	Iodine No. 3.
1890.					p. c.	p. c.		p. c.	p. c.
Aug. 4..	E. B. Kenrick..	Manitoba ..	3867	9404	Trace...	Trace...	Negatived..	0·86020	56·12
do 4..	do ..	do ..	3868	9405			Colouration.	0·86320	78·50
do 4..	do ..	do ..	3869	9406			do ..	0·86439	81·13
do 4..	do ..	do ..	3870	9407			do ..	0·86531	90·41
do 4..	do ..	do ..	3871	9408			do ..	0·86314	72·96
do 4..	do ..	do ..	3872	9409	Trace...	Trace...	Negatived..	0·86208	60·39
do 4..	do ..	do ..	3873	9410			Colouration.	0·86489	86·74
do 4..	do ..	do ..	3874	9411			Negatived...	0·86050	59·09
do 4..	do ..	do ..	3875	9412			do ..	0·86010	35·69
do 4..	do ..	do ..	3876	9413			Colouration.	0·86449	82·50
do 4..	do ..	do ..	3877	9414			do ..	0·86477	87·07
do 4..	do ..	do ..	3878	9415			do ..	0·86571	89·97
do 4..	do ..	do ..	3879	9416			Negatived...	0·86008	56·10
do 4..	do ..	do ..	3880	9417			Colouration.	0·86571	89·43
do 4..	do ..	do ..	3881	9418			do ..	0·86447	84·33
do 4..	do ..	do ..	3882	9419			do ..	0·86551	89·43
do 4..	do ..	do ..	3883	9420			do ..	0·86449	82·68
do 4..	do ..	do ..	3884	9421	Trace...	Trace...	Negatived...	0·86024	57·95
do 4..	do ..	do ..	3885	9422	do ..	do ..	Colouration.	0·86547	86·54
do 4..	do ..	do ..	3886	9423			do ..	0·86334	79·35
do 4..	do ..	do ..	3887	9424			do ..	0·86292	74·94
do 4..	do ..	do ..	3888	9425			Negatived...	0·86100	64·23
do 4..	do ..	do ..	3889	9426			Colouration.	0·86497	88·51
do 4..	do ..	do ..	3890	9427			Negatived...	0·86088	58·94
do 4..	do ..	do ..	3891	9428			do ..	0·86052	60·77
do 4..	do ..	do ..	3892	9429			do ..	0·86052	60·93
do 4..	do ..	do ..	3893	9430			Colouration.	0·86547	86·51
do 4..	do ..	do ..	3894	9431			do ..	0·86159	68·20
do 4..	do ..	do ..	3895	9432			do ..	0·86439	78·75
do 4..	do ..	do ..	3896	9433			do ..	0·86551	89·20

DRUGS, &c.—Tabulated Statement—*Continued.*

Vendor.	Residence.	Observations.
Charles Jobin	Winnipeg	Genuine.
F. Cloutier	do	Tallow ; adulterated with tallow and cotton seed oil.
C. D. Anderson	do	do do do
J. G. Hargrave	do	do do do
J. Penrass	do	do do do
H. Bernard	do	Genuine.
E. Hunter & Co.	do	Tallow ; adulterated with tallow and cotton seed oil.
Peebles & Braden	do	Genuine.
F. E. Weldon & Co.	do	do
R. H. Winram	do	Tallow ; adulterated with tallow and cotton seed oil.
R. Keeys	do	do do do
H. Ferguson	do	do do do
T. Carter	do	Genuine.
J. Dyke	do	Tallow ; adulterated with tallow and cotton seed oil.
R. H. Winram	do	do do do
A. Frederickson	do	do do do
F. Henery	do	do do do
A. Gibson	do	Genuine.
G. Hunter & Co	do	Tallow ; adulterated with tallow and cotton seed oil.
J. H. Weldon	do	do do do
T. D. Smith	do	do do do
L. H. Eastman	do	Does not contain cotton seed oil.
A. Bright	do	Tallow ; adulterated with tallow and cotton seed oil.
Lesbyville Meat Co.	do	Genuine.
Roean & Co	do	do
J. B. Langan	St. Boniface	do
F. Jean	do	Tallow ; adulterated with tallow and cotton seed oil.
L. Gagnon	do	do contains cotton seed oil and tallow ; sample sold as lard compound.
N. German	do	do adulterated with tallow and cotton seed oil.
H. H. Despars	do	do do do

APPENDIX C.—INSPECTION OF FOOD,

MILK.

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis.				
					Water.	Total Solids.	Fat.	Other Solids.	Specific Gravity.
1890.					p. c.	p. c.	p. c.	p. c.	p. c.
Oct. 27..	E. B. Kenrick....	Manitoba ..	3897	9434	86·78	13·22	4·16	9·06	1·0333
do 27..	do	do ..	3898	9435	86·87	13 13	4·18	8·95	1·0325
do 27..	do ...	do ..	3899	9436	86·93	13·07	3·86	9·21	1·0335
do 27..	do	do ..	3900	9437	87·48	12·52	3·39	9·13	1·0333
do 27..	do	do ..	4401	9438	87·22	12·78	4·24	8·54	1·0304
do 27..	do	do ..	4402	9439	86·16	13·84	4·22	9·62	1·0334
do 27..	do	do ..	4403	9440	86·41	13·59	4·27	9·32	1·0337
do 27..	do	do ..	4404	9441	88·39	11·61	3·87	7·74	1·0276
do 27..	do	do ..	4405	9442	85·77	14·23	5·12	9·11	1·0318
do 27..	do ...	do ..	4406	9443	86·50	13·50	4·46	9·04	1·0323
do 27..	do	do ..	4407	9444	86·87	13·10	3·34	9·79	1·0354
do 27..	do	do ..	4408	9445	86·24	13·76	5·27	8·49	1·0293
do 29..	do	do ..	4409	9446	87·51	12·49	4·50	7·99	1·0280
do 29..	do	do ..	4410	8447	86·32	13·68	4·23	9·45	1·0333
do 29..	do	do ..	4411	9448	83·31	16·69	7·51	9·18	1·0313
do 29..	do ...	do ..	4412	9449	85·58	14·42	4·98	9·44	1·0337
do 29..	do	do ..	4413	9450	87·38	12·62	3·67	8·95	1·0326
do 29..	do	do ..	4414	9451	87·21	12·79	3·68	9·11	1·0331
do 29..	do	do ..	4415	9452	86·10	13·90	4·42	9·48	1·0338
do 29..	do	do ..	4416	9453	86·22	13·78	4·38	9·40	1·0338
do 29..	do	do ..	4417	9454	87·17	12·83	3·59	9·24	1·0337
do 29..	do	do ..	4418	9455	86·06	13·94	4·93	9·01	1·0315
do 29..	do	do ..	4419	9456	86·76	13·24	5·10	8·14	1·0280
do 29..	do	do ..	4420	9457	85·80	14·20	5·06	9·14	1·0322
do 29..	do	do ..	4421	9458	85·49	14·51	6·36	8·15	1·0274
do 29..	do	do ..	4422	9459	87·44	12·56	4·75	7·81	1·0272
do 29..	do	do ..	4423	9460	85·77	14·23	5·18	9·05	1·0323
do 29..	do	do ..	4424	9461	84·94	15·06	6·00	9·06	1·0311
do 29..	do	do ..	4425	9462	85·32	14·68	5·28	9·40	1·0333
do 31..	do	do ..	4426	9463	86·69	13·31	4·97	8·34	1·0291
do 31..	do	do ..	4427	9464	86 43	13·57	4·47	9·10	1·0322
do 31..	do ...	do ..	4428	9465	87·08	12·92	3·82	9·10	1·0322
do 31..	do	do ..	4429	9466	87·06	12·94	3·43	9·51	1·0342
do 31..	do	do ..	4430	9467	86·83	13·17	4·23	8·94	1·0320
do 31..	do	do ..	4431	9468	87·77	12·23	2·84	9·39	1·0345
do 31..	do ..	do ..	4432	9469	86·48	13·52	4·01	9·51	1·0338
Nov. 10..	do	do ..	4433	9470	86·79	13·21	3·98	9·23	1·0335
do 10..	do	do ..	4434	9471	86·59	13·41	4·48	8·93	1·0320
do 10..	do	do ..	4435	9472	87·44	12·56	3·89	8·67	1·0318
do 10..	do	do ..	4436	9473	82·47	17·53	9·42	8·11	1·0250
do 10..	do	do ..	4437	9474	87·09	12·91	4·24	8·67	1·0311
do 10..	do	do ..	4438	9475	88·93	11·07	3·51	7·56	1·0267
do 13..	do	do ..	4439	9476	86·79	13·21	4·48	8·73	1·0315
do 13..	do	do ..	4440	9477	87·00	13·00	4·36	8·64	1·0310
do 13..	do	do ..	4441	9478	84·30	15·70	5·84	9·86	1 0343
do 13..	do	do ..	4442	9479	86 19	13·81	4·31	9·50	1·0336

DRUGS, &c.—Tabulated Statement—*Continued.*

Vendor.	Residence.	Observations.
Alex. Munroe	Winnipeg	Genuine.
do	do	do
James Brown	do	do
Duncan McDonald	do	Fat; below average.
Spears & Baxter	do	Genuine.
McKane & Kirk	do	do
do	do	do
E. Goodman	do	Watered.
A. Jannason	do	Genuine.
Wm. Templeton	do	do
Kettieson & Luary	do	Fat; below average.
Wm. Hodgins	do	Genuine.
G. Emerson	do	Non-fatty solids below average.
H. F. Craig	do	Genuine.
do	do	do partly cream.
S. Swanson	do	do
Gillespie & Luary	do	do
do	do	do
J. H. Elliott	do	do
do	do	do
Robert Jackson	do	do
J. W. Menard	St. Boniface	do
Thos. Twidle	Winnipeg	Non-fatty solids below average.
S. Helmerson	do	Genuine.
A. W. Hanly	do	Non-fatty solids below average.
do	do	do do
A. Busset	St. Boniface	Genuine.
M. Panard	Winnipeg	do
Alex. Palson	do	do
S. Evans	do	Non-fatty solids below average.
N. D. Mareo	do	Genuine.
H. A. Leed	do	do
Ruddigar & Co	do	do
B. Trunk	do	do
Mrs. M. Bell	do	Partly Skimmed.
J. Ostander	do	Genuine.
B. Sherrill	Brandon	do
do	do	do
J. Priestly	do	do
do	do	do partly cream.
J. Miles	do	do
do	do	Watered.
J. S. Tilfer	Portage La Prairie	Genuine.
do	do	do
R. Miller	do	do
R. Kitchen	do	do

APPENDIX C.—INSPECTION OF FOOD

TEA.

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of				
					Moisture.	Soluble Ash.	Insoluble Ash.	Total Ash.	Total Extract.
1891.					p. c.	p. c.	p. c.	p. c.	p. c.
Jan. 2	E. B. Kenrick	Manitoba	4443	10201	5·61	3·84	2·36	6·20	27·4
do 2	do	do	4444	10202	3·42	3·93	2·20	6·13	33·2
do 2	do	do	4445	10203	3·23	3·48	2·90	6·38	30·7
do 2	do	do	4446	10204	6·12	3·59	2·92	6·51	16·6
do 3	do	do	4447	10205	5·85	4·06	2·24	6·30	16·5
do 3	do	do	4448	10206	4·82	3·53	2·37	5·90	29·7
do 6	do	do	4449	10207	3·49	3·92	2·43	6·35	33·4
do 6	do	do	4450	10208	3·27	3·50	3·14	6·64	29·0
do 6	do	do	4451	10209	3·92	3·93	2·05	5·98	33·1
do 6	do	do	4452	10210	4·00	3·77	2·06	5·83	31·3
do 7	do	do	4453	10211	3·41	3·77	2·74	6·51	33·0
do 7	do	do	4454	10212	5·89	3·64	2·26	5·90	24·7
do 7	do	do	4455	10213	3·84	3·48	2·59	6·07	28·3
do 7	do	do	4456	10214	5·32	3·61	2·89	6·50	28·9
do 7	do	do	4457	10215	3·76	3·78	2·05	5·83	33·5
do 7	do	do	4458	10216	6·22	3·53	2·65	6·18	24·7
do 7	do	do	4459	10217	5·33	3·67	3·04	6·71	26·5
do 7	do	do	4460	10218	3·77	3·31	2·72	6·03	28·6
do 14	do	do	4461	9481	3·63	3·60	2·58	6·18	31·7
do 14	do	do	4462	9482	6·97	3·60	2·25	5·85	23·3
do 14	do	do	4463	9483	3·87	3·60	2·46	6·06	26·2
do 14	do	do	4464	9484	6·82	3·12	2·28	5·40	25·2
do 14	do	do	4465	9485	4·09	3·55	4·38	7·93	28·0
do 14	do	do	4466	9486	8·81	2·61	2·75	5·36	19·5
do 14	do	do	4467	9487	4·68	3·49	3·16	6·65	28·0
do 14	do	do	4468	9488	5·75	3·29	4·01	7·30	27·9
do 14	do	do	4469	9489	6·03	3·68	2·10	5·78	27·9
do 14	do	do	4470	9490	8·27	3·40	2·73	6·13	19·1
do 14	do	do	4471	9491	3·80	3·47	3·56	7·03	28·0
do 14	do	do	4472	9492	6·00	3·84	2·08	5·92	26·1
do 14	do	do	4473	9493	4·72	3·55	2·13	5·68	30·4
do 14	do	do	4474	9494	4·45	3·51	2·04	5·55	30·7
do 14	do	do	4475	9495	6·31	3·48	1·82	5·30	27·1
do 14	do	do	4476	9496	6·08	3·50	2·35	5·85	30·7
April 20	do	do	4477	10807	6·90	3·31	2·57	5·88	21·8
do 20	do	do	4478	10808	5·08	3·47	2·48	5·95	23·1
do 20	do	do	4479	10809	7·68	3·57	2·21	5·78	23·5
do 20	do	do	4480	10810	7·95	3·54	2·34	5·88	25·4
do 20	do	do	4481	10811	7·64	3·51	2·15	5·66	25·8
do 20	do	do	4482	10812	7·80	3·02	2·28	5·30	22·0
do 20	do	do	4483	10813	8·10	3·73	2·22	5·95	23·5
do 20	do	do	4484	10814	8·40	3·66	2·20	5·86	22·4
do 20	do	do	4485	10815	8·25	3·93	2·33	6·26	23·2
do 20	do	do	4486	10816	8·21	3·75	1·99	5·74	22·9
do 20	do	do	4487	10817	6·83	3·21	1·74	4·95	26·9
do 20	do	do	4488	10818	5·78	3·47	2·01	5·48	28·0
do 20	do	do	4489	10819	8·43	3·76	2·04	5·80	24·6
do 20	do	do	4490	10820	3·38	3·54	3·21	6·75	26·5
do 20	do	do	4491	10821	3·45	3·48	2·98	6·46	31·0
do 20	do	do	4492	10822	3·29	3·58	2·40	5·98	32·2
do 20	do	do	4493	10823	3·53	3·71	2·77	6·48	33·9
do 20	do	do	4494	10824	3·75	3·39	2·61	6·00	32·6
do 20	do	do	4495	10825	6·28	3·56	2·12	5·68	30·4
do 20	do	do	4496	10826	4·78	3·66	2·01	5·67	35·0
do 20	do	do	4497	10827	6·58	4·02	2·28	6·30	32·2
do 20	do	do	4498	10828	4·32	4·06	2·10	6·16	37·0
do 20	do	do	4499	10829	5·03	3·87	1·97	5·84	36·5
do 20	do	do	4500	10830	3·68	3·43	3·38	6·81	29·2

DRUGS, &c.—Tabulated Statement—*Continued.*

Analysis.		Vendor.	Residence.	Observations.
Tannin.	Theine.			
p. c.	p. c.			
5·37	2·97	F. H. Cluff	Ottawa	Black tea ; genuine.
10·09	2·32	do	do	Japan do
10·32	2·75	J. H. Allen	do	do do
3·91	1·99	do	do	Black do
3·47	2·68	E. B. Brown	do	do do
7·12	2·83	do	do	Assam do
8·76	2·30	F. J. Beamish	Pembroke	Japan do
8·55	2·47	S. J. Flucker	do	do do
12·39	2·53	R. Menzies	do	do do
10·30	3·35	Geo. Hollinsworth	do	Assam do
11·25	3·08	S. Keady	Arnprior	Japan do
5·54	3·31	do	do	Black do
7·93	2·21	J. F. Whyte	do	Japan do
8·83	2·21	do	do	do do
12·87	2·53	A. R. G. Peden	Carleton Place	do do
6·21	2·48	do	do	Black do
9·29	1·89	J. Doucet	do	Japan do
8·87	2·11	G. Graham	do	do do
8·26	2·84	E. Hunker & Co	Winnipeg	do do
6·15	2·84	do	do	Black do
8·60	2·08	F. E. Weldon & Co	do	Japan do
7·09	2·75	do	do	Black do
8·27	2·32	M. Dufresne	do	Japan do
3·99	2·23	do	do	Black do
8·18	2·41	Alex. McMillan	do	Japan do
7·77	2·32	Dykes & Acton	do	do do
6·49	3·23	do	do	Black do
3·66	2·45	do	do	do do
8·66	2·46	do	do	Japan do
5·20	3·42	Toronto Tea Co.	do	Black do
8·96	3·09	do	do	Japan do
8·78	2·41	Hunter & McDonald	do	do do
5·72	3·27	do	do	Black do
7·43	3·00	Hodges & Co.	do	do do
4·48	2·76	F. F. & J. Galt	do	Congou do
5·01	3·01	do	do	do do
4·92	2·70	do	do	do do
6·12	2·61	do	do	do do
7·41	2·52	do	do	do do
4·52	3·00	do	do	do do
5·07	2·45	do	do	do do
4·39	2·23	do	do	do do
4·29	2·48	do	do	do do
5·55	2·72	do	do	do do
8·51	2·55	do	do	Ceylon do
7·18	2·80	do	do	do do
5·04	2·76	do	do	Assam do
7·48	1·85	do	do	Japan do
8·81	2·53	do	do	do do
10·14	2·64	do	do	do do
11·30	2·78	do	do	do do
10·89	2·05	do	do	do do
9·55	2 07	do	do	Young Hyson ; genuine.
11·59	2·49	do	do	do do
11·40	2·50	do	do	do do
10·94	2·76	do	do	do do
11·40	2·76	do	do	do do
8·22	2·45	do	do	Gunpowder do

APPENDIX C—INSPECTION OF FOOD, DRUGS, &c.—Tabulated Statement—*Concluded.*

VINEGAR.

Date.	Name of Analyst.	District.	No. of Analyst's Certificate.	No. of Sample.	Result of Analysis.							Vendor.	Residence.	Observations.
					Absolute Acetic Acid by Weight.	Free Mineral Acid.	Solids Dried at 100° C.	Ash.	Trace.	Distinct Trace.	Specific Gravity.			
1891.					p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
April 15	E. B. Kenrick	Manitoba	7701	9497	5·39	None.	0·76	0·03	.....	....	1·0100	S. Allen.......	Winnipeg...	Neither genuine malt nor genuine cider vinegar.
do 15	do ..	do ..	7702	9498	6·83	do	0·08	0·03	.....	....	1·0092	do	do ..	Not genuine wine vinegar.
do 15	do ..	do ..	7703	9499	9·76	do	0·05	0·02	.....	....	1·0128	do	do ..	do
do 15	do ..	do ..	7704	9500	5·49	do	0·09	0·04	.....	....	1·0065	do	do ..	do
do 15	do ..	do ..	7705	10801	5·93	do	0·68	0·02	.....	....	1·0107	do	do ..	Neither genuine malt or cider vinegar.
do 15	do ..	do ..	7706	10802	40·57	do	0·06	0·01	.....	....	1 0521	do	do ..	Not genuine wine vinegar, being undiluted acetic acid; adulterated under the Act, in that it contains copper.
do 15	do ..	do ..	7707	10803	5·12	do	1·37	0·13	.....	....	1·0119	Gerdlestone & Co.	do ..	Colour, dark brown.
do 15	do .	do ..	7708	10804	10·20	do	0·42	0·03	Trace.	Distinct trace.	1·0143	do ..	do ..	Not genuine wine vinegar; adulterated; contains lead and copper; injurious to health.
do 15	do ..	do ..	7709	10805	5·05	do	2·04	0·16	.....	.. ...	1·0103	do ..	do ..	Colour, dark brown.
do 15	do ..	do ..	7710	10806	5·35	do	0·23	0·02	None.	very distinct traces.	1·0073	do ..	do ..	Not genuine wine vinegar; adulterated; it contains lead, being injurious to health.

BULLETIN No. 17—MILK SUPPLY OF TOWNS.

To the Commissioner of Inland Revenue:—

SIR,—In former reports regarding milk supply the particulars given had reference chiefly to the cities and larger towns of the Dominion. In several of these—such as Montreal, Toronto, Hamilton and London—the examination of milk is now carried on either by a special food inspector appointed by the municipality and working under the Adulteration Act, or by medical health officers exercising the powers conferred on them by such statutes as chapter 205 of the Revised Statutes of Ontario. On account of these circumstances, it was thought advisable during the first quarter of the present fiscal year to collect samples of milk sold in some of the smaller towns of Ontario. In order to do this fairly, and obtain a correct estimate of the quality of the milk supplied in the towns visited, the collectors were instructed to obtain samples from as many vendors as possible in each place. The particulars regarding these and the results obtained in their analysis are given in the following tables:—

RESULTS of Analysis of Milk sold as Whole Milk.

Date of Collection	No. of Sample.	Name and Address of Furnisher.	Analysis.			Total Solids.	Specific gravity at 15° C.	Analyst.	Remarks.
			Water.	Butter Fat.	Other Solids.				
1890.		*Hull, P.Q.*							
July 15..	9680	Moses Benedict	84·27	3·18	8·44	11·62		T. Macfarlane	Below average.
do 15..	9681	Joseph Reneau	87·20	3·78	9·02	12·80		do	
do 15.	9682	Joseph Merian	86·61	4·42	8·97	13·39		do	
do 15..	9683	Marcel Jenette	86·34	4·88	8·78	13·66		do	
do 15..	9684	Joseph Lentiar	86 14	5·22	8·64	13·86		do	
do 15..	9685	Thomas Wilson	88·05	3·08	8·87	11·95		do	do
do 15..	9686	Félix Latour	88·00	3·47	8·53	12·00		do	
do 15..	9687	Louis Remon	91·25	1·96	6·79	8·75		do	Watered.
do 15..	9688	Francis Marlo	88·70	2·76	8·54	11·30		do	Partly skimmed.
do 15..	9689	Henri Foubert	86·36	4·46	9·17	13·63		do	
do 15..	9690	Léon Chénier	86·74	4·14	9·12	13·26		do	
do 15..	9691	David Lapointe	86·98	3·94	9·07	13·01		do	
do 15..	9692	Honoré Normand	86·25	4·97	8·78	13·75		do	
do 15..	9693	Alex. Chautrean	88·29	2·73	8·98	11·71		do	do
do 15..	9694	Maxime Diotte	87·63	3·83	8 54	12·37		do	
		Alexandria, Ont.							
July 16..	9695	Wm. Bedford	87·09	3·83	9·08	12·91	1·0334	T. Macfarlane	
do 16..	9696	D. Chisholm	87·04	3·87	9·09	12·96	1·033	do	
do 16..	9697	A. B. McDonald	86·73	4·35	8·92	13·27	1·0314	do	
do 16..	9698	D. Urquhart	89·11	1·51	9·38	10·89	1·036	do	Skimmed.
do 16..	9699	A. Simpson	89·96	1·09	8·95	10·04	1·0347	do	do
do 16..	9700	A. D. McGillivray	81·46	9·75	8·79	18·54	1·0276	do	Partly cream.
do 16..	10101	D. McIntosh	87·96	3·21	8·83	12·04	1·0334	do	Below average.
do 16..	10102	D. Cameron	87·91	2·95	9·14	12·09	1·035	do	Partly skimmed.
do 16..	10103	D. A. McDonald	87·59	3·55	8·86	12·41	1·0322	do	
do 17..	10104	G. Lawson	87·69	3·02	9·29	12·31	1·035	do	do
do 17..	10105	H. A. Ahern	87·54	3·34	9·12	12·46	1·0344	do	
do 17..	10106	G. Millar	87·71	4·20	9·09	13·29	1·0347	do	
		Cornwall, Ont.							
Aug. 5...	9201	Wm. Hall, 4th Street	87·72	3·65	8·63	12·28	1·032	do	

do	5..	9202	Joseph Leschamp, Amelia Street..........	87·03	3·99	8·98	12·97	1·0334	do	
do	5..	9203	Donald Crites, Amelia Street	86·20	5·46	8·34	13·80	1·0302	do	
do	5..	9204	G. G. Butler, East Front................	87·40	4·18	8·42	12·60	1·0306	do	
do	5..	9205	Wm. Fitzgerald, East Front..............	87·31	4·08	8·61	12·69	1·0317	do	
do	5..	9206	B. Nero, 4th Street.....................	87·04	4·21	8·75	12·96	1·032	T. Macfarlane	
do	5..	9207	Geo. Bronson, Paper Mills...............	87·43	4·28	8·29	12·57	1·0304	do	
do	5..	9208	Duncan Grant, Sidney Street.............	85·67	5·38	8·95	14·33	1·0327	do	
do	5..	9209	S. Mackay, East Front...................	86·75	4·52	8·73	13·25	1·0309	do	
			Prescott.							
do	6..	9210	John Smith, Farmer......................	87·38	3·82	8·80	12·62	1·0323	do	
do	6..	9211	Mrs. McKeon, East Street................	88·54	3·04	8·42	11·46	1·0312	do	Below average.
do	6..	9212	W. S. Wert, Dibble Street	87·41	2·89	9·70	12·59	1·0263	do	Partly skimmed.
do	6..	9213	Alfred Presse, The Fort.................	87·59	3·32	9·09	12·41	1·0343	do	
do	6..	9214	Comfort Whiting, King Street............	86·67	4·28	9·05	13·33	1·0333	do	
do	6..	9215	James McGarr, Henry Street..............	86·93	3·88	9·19	13·07	1·0343	do	
do	6..	9216	John W. Raw, Dairy Farmer...............	88·30	3·72	7·98	11·70	1·0309	do	Below average.
			Cardinal, Ont.							
do	6..	9217	James Hodge, Dairy Farmer...............	88·92	3·80	8·28	12·08	1·0312	do	Below average in solids, not fat.
do	6..	9218	R. Prosser..............................	88·75	3·14	8·11	11·25	1·0302	do	Below average.
			Morrisburgh, Ont.							
do	7..	9219	P. Colhoun, Main Street.................	88·48	3·19	8·33	11·52	1·0314	do	Under average.
do	7..	9220	R. Gibson, Main Street..................	87·55	3·72	8·73	12·45	1·0324	do	
do	7..	9221	S. P. Stata, Main Street................	87·32	3·61	9·07	12·68	1·0332	do	
do	7..	9222	A. Dain	88·11	3·41	8·48	11·89	1·0322	do	Under average.
do	7..	9223	Alex. Thom, Main Street.................	87·25	4·26	8·49	12·75	1·0317	do	
do	7..	9224	Chas. B. Clark, Main Street.............	86·03	4·54	9·43	13·97	1·0344	do	
do	7..	9225	Edgard Pruner, 1st Canal Lock...........	86·44	4·48	9·08	13·56	1·0332	do	
do	7..	9226	A. Cutler, Canal Lock...................	88·97	1·86	9·17	11·03	1·0334	do	Skimmed.
do	7..	9227	Charles Seeley..........................	85·80	5·32	8·88	14·20	1·0327	do	
			Peterborough, Ont.							
Aug.	21..	9701	Wm. Head, Smith's Township..............	88·05	3·39	8·56	11·95	1·0306	do	Below average.
do	21..	9702	Mrs. Sutherland, Simcoe Street..........	99·05	2·07	8·88	10·95	1·0327	do	Partly skimmed.
do	21..	9703	Mrs. Lynn, Charlotte Street.............	99·05	2·15	8·80	10·95	1·0322	do	do
do	21..	9704	T. Hooper, George Street................	87·12	4·59	8·29	12·88	1·0327	do	
do	21..	9705	H. Long do	88·74	2·52	8·74	11·26	1·0314	do	do
do	21..	9706	J. C. Craig do	88·69	2·29	9·04	11·33	1·0306	do	do
do	21..	9707	Wm. Denoon, from Ashburnham..........	86·35	4·14	9·51	13·65	1·0322	do	

RESULTS of Analysis of Milk Sold as Whole Milk—*Continued.*

Date of Collection	No. of Sample.	Name and Address of Furnisher.	Analysis.			Total Solids.	Specific Gravity at 15° C.	Analyst.	Remarks.
			Water.	Butter Fat.	Other Solids.				
1890.		*Lindsay, Ont.*	p. c.	p. c.	p. c.	p. c.	p. c.		
Aug. 23..	9708	Mrs. S. Dormer	86·72	4·23	9·05	13·28	1·0306	T. Macfarlane	
do 23..	9709	T. S. Williams	86·68	4·32	9·00	13·32	1·0314	do	
do 23..	9710	Andrew Brown	87·25	3·48	9·37	12·75	1·0324	do	
do 23..	9711	J. Guiry	88·55	2·54	8·91	11·45	1·0312	do	Partly skimmed.
do 23..	9712	Mrs. C. Jewett	88·47	2·72	8·81	11·53	1·0306	do	do
		Beaverton, Ont.							
do 25..	9713	D. Gillespie	86·83	3·91	9·26	13·17	1·033	do	
do 25..	9714	A. Hamilton	88·22	2·99	8·79	11·78	1·0323	do	do
do 25..	9715	Wm. White	99·51	1·40	9·09	10·49	1·0309	do	Skimmed.
do 25..	9716	T. Trelaven	87·76	3·33	8·91	12·24	1·033	do	Below average.
do 25..	9717	D. C. Campbell	87·88	3·42	8·70	12·12	1·0316	do	do
		Orillia, Ont.							
do 25..	9718	H. Pethrick (restaurant)	87·85	3·95	8·20	12·15	1·032	do	
do 25..	9719	P. Cuddahee, Peter Street	87·06	4·12	8·82	12·94	1·032	do	
do 25..	9720	Mrs. Wright, Coldwater Street	85·58	7·12	7·30	14·42	1·0258	do	Partly cream.
do 25..	9721	Jas. Haw, Orillia Hotel	86·51	4·51	8·98	13·49	1·0322	do	
do 25..	9722	K. M. Pettitt, Spring Bank Dairy	87·68	4·04	8·28	12·32	1·0302	do	
do 25..	9723	Mrs. Davis, West Street	87·44	4·15	8·41	12·56	1·0309	do	
do 25..	9724	Mrs. Donaldson	88·05	3·36	8·59	11·95	1·0324	do	Below average.
do 25..	9725	Mr. Vanderburg	87·16	4·02	8·82	12·84	1·0326	do	
		Barrie, Ont.							
do 26..	9726	T. Johnson, Dunlop Street	87·98	3·22	8·80	12·02	1·0334	do	Below average.
		From carts on streets—							
do 26..	9727	John Goodfellow	88·49	3·81	7·70	11·51	1·0294	do	do
do 26..	9728	Wm. Caldwell	86·68	4·71	8·61	13·32	1·0325	do	
do 26..	9729	S. Dyment	87·83	3·65	8·52	12·17	1·0306	do	
do 26..	9730	W. Ainley	89·14	3·41	7·45	10·86	1·0319	do	Watered.

do	26..	9731	P. Cavanagh	89·33	2·79	7·88	10·67	1·0319	do	do
do	26..	9732	Mrs. Wm. Chapell	87·75	3·03	9·22	12·25	1·0349	do	Partly skimmed.
			Bradford, Ont.							
do	27..	9733	Mrs. Wm. Collins	87·62	4·88	7·50	12·38	1·0336	do	Below average in solids not fat.
do	27..	9734	P. Chapelle	88·69	3·22	8·09	11·31	1·0325	do	Below average.
do	27..	9735	Mrs. Archer	91·98	0·14	7·88	8·02	1·0359	do	Completely skimmed.
do	27..	9736	Mrs. Coates	90·18	2·01	7·81	9·82	1·0336	do	Below average.
do	27..	9737	Mr. S. Lukes	87·64	4·16	8·20	12·36	1·0338	do	
do	27..	9739	B. Stewart	90·08	1·20	8·72	9·92	1·0359	do	Skimmed.
			Newmarket, Ont.							
do	28..	9742	J. Cocksedge, Royal Hotel	85·42	4·88	9·70	14·58	1·0327	do	
do	28..	9743	Mrs. Fienhelder.	89·54	2·05	8·41	10·46	1·0314	do	do
do	28..	9744	C. Lundy	87·94	3·28	8·78	12·06	1·032	do	Under average.
do	28..	9746	Mrs. Manning	84·47	7·58	7·95	15·53	1·0317	do	Partly cream.
			Aurora, Ont.							
do	28..	9748	Mr. Lyons	88·86	1·94	9·20	11·14	1·0333	do	Skimmed.
do	28..	9750	R. Lawson	87·15	4·11	8·74	12·85	1·032	do	
do	28..	9751	W. Scott & Son	86·92	4·39	8·69	13·08	1·0306	do	
do	28..	9752	C. Doan	87·96	4·39	7·85	12·24	1·0327	do	Below average in solids not fat.
			Toronto.							
do	30..	9753	W. Findlay, 108 Robert Street	88·49	3·39	8·12	11·51	1·0314	do	Below average.
do	30..	9754	R. J. Coburn, "Crescent Dairy"	88·86	3·25	7·89	11·14	1·0317	do	Watered.
do	30..	9755	C. D. Growhurst, "Imperial Dairy," Adelaide Street	87·80	3·78	8·42	12·20	1·0334	do	
do	30..	9756	A. Alexander, "Victoria Dairy," 211 McCaul Street	89·07	3·21	7·72	10·93	1·0294	do	do
do	30..	9757	Downey Bros., "Avenue Dairy," 81 University Street	89·70	2·70	7·60	10·30	1·0288	do	do
do	30..	9758	F. Forsyth, "Claremont Dairy," 7 Alice Street	88·04	3·31	8·65	11·96	1·0328	do	Below average.
do	30..	9759	A. Hopkins, "Devon Dairy," 115 Queen Street	88·46	3·18	8·36	11·54	1·0326	do	do
do	30..	9760	Wm. McColl, "Cherry Grove Dairy," 60 Eglington Avenue	89·56	1·78	8·66	10·44	1·0344	do	Skimmed.
do	30..	9761	Wm. McFarlane, "Farmer's Dairy," 375 Queen Street	88·81	2·83	8·36	11·19	1·033	do	Partly skimmed.
do	30..	9762	N. J. Harrison, "Newtonbrook Dairy," 548 Yonge Street	89·13	2·40	8·47	10·87	1·0328	do	do

RESULTS of Analysis of Milk sold as Whole Milk.

Date of Collection.	No. of Sample.	Name and Address of Furnisher.	Analysis.			Total Solids.	Specific Gravity at 15° C.	Analyst.	Remarks.
			Water.	Butter Fat.	Other Solids.				
			p. c.	p. c.	p. c.	p. c.			
1890.		*Toronto*—Concluded.							
Aug. 30..	9763	Frederick Sole, "Oakville Dairy," 473 Yonge Street	88·61	3·20	8·19	11·39	1·0308	T. Macfarlane	Below average.
do 30..	9764	R. A. Hardy, 362 Yonge Street	87·71	3·46	8·83	12·29	1·0328	do	
		Harriston Ont.							
do 23..	10301	Thos. Ovens	87·01	3·74	9·25	12·99	1·0338	do	
do 23..	10302	John C. Fulton	86·21	4·51	9·28	13·79	1·0326	do	
do 23..	10303	Thos. Boyer	87·07	3·70	9·23	12·93	1·0316	do	
do 23..	10304	Alex. MacCready	84·81	6·16	9·03	15·19	1·0308	do	Partly cream.
do 23..	10305	Mrs. Frank Birse	87·15	3·58	9·27	12·85	1·0338	do	
do 23..	10306	Miss Sarah Dally	87·54	3·41	9·05	12·46	1·0326	do	
do 23..	10307	Thos. Bowers	85·01	5·88	9·11	14·99	1·0314	do	
do 23..	10308	Robt. Blackwood	88·84	2·23	8·93	11·16	1·0344	do	Partly skimmed.
do 23..	10309	Thos. Johnson	85·26	5·24	9·50	14·74	1·0347	do	
do 23..	10310	John Wilson	88·23	3·01	8·76	11·77	1·0328	do	Slightly skimmed.
		Walkerton, Ont.							
do 25..	10311	Mrs. Samuel Ramsay	87·78	3·46	8·76	12·22	1·0318	do	
do 25..	10312	Wm. Thompson	88·31	3·59	8·10	11·69	1·0296	do	Below average.
do 25..	10313	Wm. Benedict	87·32	3·84	8·84	12·68	1·0324	do	
do 25..	10314	Levi Kunsenhauser	86·80	4·45	8·75	13·20	1·0320	do	
do 25..	10315	Mrs. Geo. Grasser	90·06	1·67	8·27	9·94	1·0312	do	Skimmed.
		Paisley, Ont.							
Aug 26..	10316	Mrs. Wm. Stait	89·35	1·85	8·80	10·65	1·0333	T. Macfarlane	Skimmed.
do 26..	10317	Mrs. Margaret Sirgeson	84·99	5·39	9·62	15·01	1·0327	do	
do 26..	10318	Mrs. Robert Collinson	86·88	3·95	9·17	13·12	1·0330	do	
do 26..	10319	Mrs. Henry Crowe	87·49	3·45	9·06	12·51	1·0340	do	
do 26..	10320	Mrs. John McPhail	87·11	4·28	8·61	12·89	1·0327	do	

			Southampton, Ont.							
Aug.	27..	10321	Richard Hoiles	89·12	2·33	8·55	10·88	1·0323	do	Partly skimmed.
do	27..	10322	Mrs. John Clennin	88·32	3·29	8·39	11·68	1·0309	do	Below average.
do	27..	10323	Mrs. Thomas Davis	87·93	3·35	8·72	12·07	1·0320	do	do
do	27..	10324	Mrs. Roderick McKenzie	86·60	4·35	9·05	13·40	1·0320	do	
			Listowel, Ont.							
do	27..	10325	Robert Woofe, Main Street	87·90	3·60	8·50	12·10	....	do	
do	27..	10326	George Draper	86·38	5·02	8·60	13·62	1·0306	do	
do	27..	10327	John W. Dobson	85·04	6·50	8·46	14·96	1·0294	do	Partly cream.
do	27..	10328	Mrs. Sarah Davidson	87·83	3·92	8·25	12·17	1·0314	do	
do	27..	10329	Francis Coleman, Elma Township	89·93	2·36	7·71	10·07	....	do	Watered.
			Stratford, Ont.							
do	28..	10331	Peter Kastuer, Ellice Township, Co. Perth	87·87	3·52	8·69	12·22	....	do	
do	28..	10332	Thomas Waldie, Downie Township	87·58	3·97	8·45	12·42	1·031	do	
do	28..	10333	Mrs. Robert Carson	89·01	2·35	8·64	10·99	1·0338	do	Partly skimmed.
do	28..	10334	John Low, Downie Township	86·78	5·04	8·18	13·22	1·0306	do	
do	28..	10335	Mrs. George Steven, Railway Avenue	86·75	4·26	8·99	13·25	1·032	do	
do	28..	10336	Mrs. N. Griffin, Erie St	87·75	3·71	8·54	12·25	1·033	do	
do	28..	10337	James Rob, Strachan Street	87·08	3·95	8·97	12·92	1·0318	do	
do	28..	10338	Thomas Cardwell, Downie Township	88·22	3·24	8·54	11·78	1·032	do	Below average.
do	28..	10339	Mrs. Wm. McKone, Hibernia Street	86·75	4·34	8·91	13·25	1·0338	do	
do	28..	10340	George Schwitzer, Ellice Township	88·68	3·23	8·09	11·32	1·0318	do	do
			Seaforth, Ont.							
do	29..	10341	Josh. Brown, Haperhay Township	85·44	5·71	8·85	14·56	1·0316	do	
do	29..	10342	D. D. Wilson	85·54	5·99	8·47	14·46	1·0306	do	
do	29..	10343	Jas. Stewart, Main Street	82·96	8·96	8·08	17·04	1·0328	do	Partly cream.
do	29..	10344	Wm. Aberhart, Egmondville Township	87·74	3·63	8·63	12·26	1·032	do	
			Clinton, Ont.							
do	29..	10345	Wm. Weir, Goderich Township	86·39	5·13	8·48	13·61	1·0304	do	
do	29..	10346	Peter Towers	87·83	3·74	8·43	12·17	1·0312	do	
do	29..	10347	W. J. Paisley	87·29	3·54	9·17	12·71	1·0352	do	
do	29..	10348	Lawrence Tindall	87·22	4·53	8·25	12·78	1·0312	do	
			Goderich, Ont.							
do	30..	10349	R. Imrie	88·33	3·39	8·28	11·67	1·0312	do	Below average.
do	30..	10350	Sanford Stokes	87·57	3·93	8·50	12·43	1·0324	do	
do	30..	10351	Mrs. Jas. Galloway	87·81	3·71	8·48	12·19	1·0322	do	
do	30..	10352	Albert Kneeshaw	87·59	3·92	8·49	12·41	....	do	
do	30..	10353	Samuel Cox	85·71	5·46	8·83	14·29	....	do	
do	30..	10354	W. Bell	88·48	3·12	8·40	11·52	1·0324	do	do

The following summary shows the number of the samples taken in each of the towns visited, and the number of genuine samples obtained, as well as of those judged to be adulterated or inferior, in view of the facts recorded in the foregoing tables:—

	No. of Samples taken.	No. Genuine.	No. Adulterated or Inferior.
Hull, P.Q	15	10	5
Alexandria	12	7	5
Cornwall	9	9	0
Prescott	7	4	3
Cardinal	2	0	2
Morrisburg	9	6	3
Peterborough	7	2	5
Lindsay	5	3	2
Beaverton	5	1	4
Orillia	8	7	1
Barrie	7	2	5
Bradford	6	1	5
Newmarket	4	2	2
Aurora	4	2	2
Toronto	12	2	10
Harriston	10	8	2
Walkerton	5	3	2
Paisley	5	4	1
Southampton	4	1	3
Listowel	5	4	1
Stratford	10	7	3
Seaforth	4	4	0
Clinton	4	4	0
Goderich	6	4	2
	165	97	68

I have the honour to be, Sir,
Your obedient servant.
THOMAS MACFARLANE,
Chief Analyst.

OTTAWA, 29th September, 1890.

BULLETIN No. 18.—OTTAWA AND MAGOG RIVER WATERS.

E. Miall, Esq.,
Commissioner of Inland Revenue.

Sir,—The results of an examination into the character of the water of the Ottawa River, carried out by Mr. McGill, Assistant Analyst, in the month of April last, were duly reported to the Minister of Marine and Fisheries, and they were subsequently published in Bulletin No. 15. On the 10th of June the thanks of the Minister for this report were conveyed to you, together with the remark that "he "fully concurrs in Mr. McGill's suggestion that samples be taken at some later "period, say July or August, when the water is at its lowest point in the Ottawa, "with a view to a further analysis being made." In consequence of this communication a second investigation was authorized by you, the results of which were sent to the Department of Marine and Fisheries on the 3rd October last, and are now placed before you with a view to publication.

It will be seen, from a perusal of the report by Mr. McGill hereto appended, that no facts have yet been discovered which would lead to the conclusion that the sawdust deposits materially affect the quality of the water of the Ottawa River. On the other hand, it seems to be slightly deteriorated in its passage to Montreal by the introduction of refuse matter from the population living on its banks above that city as far as Ottawa.

In consequence of representations by several citizens of Sherbrooke, Que., I received instructions from you to cause analyses to be made of the water supplied to that town. Mr. McGill was entrusted with this investigation also, and his report is herewith submitted, and recommended for publication, along with the one which has reference to the Ottawa River water.

I have the honour to be, Sir,
Your obedient servant,
THOMAS MACFARLANE,
Chief Analyst.

10th November, 1890.

REPORT UPON TWELVE SAMPLES OF WATER FROM THE OTTAWA RIVER AND OTHER SOURCES, COLLECTED BETWEEN THE 18TH AND 27TH OF AUGUST, 1890.

In Table I will be found details as to the time and place of collection of each sample.

In Table II are given the numerical results of analysis.

Table III contains an arrangement of the details of analysis such as to facilitate comparison.

The main object kept in view in the examination of these samples has been the ascertaining whether or not the Ottawa River is materially polluted as a source of domestic supply between Deschenes Lake and the Lake of Two Mountains; and if so, whether this pollution is due to the sawdust deposits occurring between these points.

The samples were all collected between the 18th and 27th of August, during which period the weather remained very uniform in character. The water of Deschenes Lake lowered about 2 or 3 inches (as nearly as I could judge) between the dates. In order to ascertain whether the character of its water had materially changed in the interval I took a sample on the 27th of August from the same point at which I had made the collection on the 18th of the month. The results of analysis of these two samples show a slight change for the better at the last collection, but the difference is so slight that I have thought it quite safe to take the mean of the two analyses as showing the average character of Deschenes Lake water for the period stated.

The Ottawa city supply is taken from the river before any large quantity of sawdust has entered it. The intake is far enough below Deschenes Lake to give the water the benefit of any amelioration effected by the Deschenes Rapids. We might reasonably look for some improvement consequent upon the æration resulting from the half mile or more of rapids above the city intake, and we find this expectation realized. Two samples, IV and IX, were collected at the laboratory taps after these had run freely for three hours on the 20th and 23rd August. The mean result of these two analyses (which do not materially differ) shows a slight but appreciable improvement in the Ottawa city water as compared with that of Deschenes Lake. This is shown in the lessening of the vegetable organic matter (lower oxygen absorption and loss of weight on ignition of solids) and lessening of the nitrogen content in every form. It is not at all unlikely that the loss of nitrates and of oxidisable matter *pari passu* may be explained by the oxidation of the latter at the expense of the former. A sample (No. 5) was also taken on the 20th August at the site of the proposed intake for city use. This gave a slightly higher mineral content, and slightly higher nitrates and ammonia than the sample taken from the present city supply on the same day; but the differences are very small, and the former averages (line 6, Table III) are scarcely altered by the introduction of these numbers. I shall take the mean (given in line 8 of Table III) as characterizing the Ottawa River water above the Chaudière Falls, *i.e.*, above the sawdust deposits.

In order to ascertain the possible influence of the sawdust deposits, I collected samples at two points further down the river, viz., at Grenville Rapids, above and below, and at St. Anne's.

The samples taken at Grenville and Carillon (see line 17, Table III) show slightly higher mineral matter, with an increase in matter destructible on ignition (chiefly organic). This may possibly come from vegetable débris in the river, but is so very small in amount that it cannot be said to materially alter the character of the water. There is a slight increase of nitrogen both as free and albuminoid ammonia, with a slight decrease of nitrogen in nitrites or nitrates, owing, no doubt, to the destruction of these in contact with oxidisable organic matter.

The vegetable matter oxidisable by permanganic acid is scarcely higher than that found above the Chaudière Falls, and is less than that found in Deschenes Lake.

It seemed right before attributing even these slight changes to saw dust to consider the influence of the city sewage upon the Ottawa water. The sewers enter the river a short distance below New Edinburgh, and I took samples at a distance of about half a mile below the sewer mouths on the 19th of August.

In the sample taken below the sewers on the 29th March (see Bulletin No. 15) I found no certain indications of sewage pollution, and this I attributed to the fact that a thorough admixture of the sewer contents with the water of the river does not take place, especially in winter, until a considerable distance below the sewer outlet. Had I taken these samples very far below the sewer mouths I should have had to select a point below rather extensive sawdust beds, and I chose rather to solve the difficulty by taking four samples at points in a line crossing the River about half a mile below the sewage entrance. The mean result of the work upon these is given in line 13 of Table III. This shows the maximum pollution effected by the Ottawa city sewage; and the differences given in line 14 of Table III show the amount of the change immediately produced.

It must not, however, be inferred that the changes here indicated persist throughout the course of the river. Indeed, it may be easily seen in the study of one of them, the chlorine in chlorides, that while this is distinctly notable at the point in question, it ceases to be a measurable quantity when complete admixture of the sewage with the water of the river has taken place, as at Grenville. This is simply an effect of dilution, since the chlorides are not removed by any influence operating in the course of the river. Other constituents of sewage, as nitrogenous organic matter, *e.g.*, urea, gradually undergo destruction and change in consequence of oxidation or other influences to which they are necessarily subjected in the course of their passage down stream.

While, therefore, it would be unwarrantable to attribute the slight changes in character of the water of the Ottawa River as this is found above the Chaudière Falls, and below Grenville, to the influence of Ottawa city sewage, it is at least justifiable to insist upon the fact that the changes effected by the entrance of the sewage into the streams are in the main identical in kind with the changes seen in the character of the water in the lower reaches of the river. This is true of the increase in total solids, the increase in mineral content, the increased loss on ignition, and the increase of nitrogen as albuminoid ammonia. In spite of the influx of nitrates from the sewers, it is true that we have a marked decrease of these at Grenville, but this is easily explicable as they are prone to reduction in contact with easily oxidised organic matter. It is instructive to note that the readily oxidised organic matter (see oxygen consumed in 15 minutes) is less in quantity as the river progresses, although the total oxidisable organic matter (see oxygen absorption for 4 hours) increases. This seems to point to constant addition of organic matter to the river in a quantity more than enough to make up for that which is constantly disappearing through oxidation. It is also interesting to note that this addition of oxidisable organic matter appears to cease (relatively) with the Lake of Two Mountains. The sample (No. VI) taken at St. Anne's shows markedly less oxygen absorbed than any of the samples collected higher up the river. This sample shows much higher solids than any of the preceding ones, but these solids were largely in suspension, not solution. The sample was taken in rapidly running water just at the head of the St. Anne's Rapids; whereas the other samples were taken in comparatively still water. The only respect in which it compares unfavourably with the preceding samples is its content of albuminoid ammonia, and I am inclined to think that in this factor of the analysis we have the characteristic indication of the Ottawa city sewage, to which has been added that of towns and villages along the river.

To sum up this part of the question, I am of opinion that in the results of analysis here shown we have proof that organic matter (mainly vegetable) in very slight quantity is added to the water of the Ottawa throughout its course between the Chaudière Falls at Ottawa and Carillon; that this organic matter, in so far as it is vegetable, is in too small amount to materially change the character of the river; that the nitrogenous organic matter convertible into ammonia by boiling with alkaline permanganate does not decrease, but even increases as the river proceeds downwards, being higher in amount at the foot of the Lake of Two Mountains than at the Ottawa city intake, and that in the incompletely oxidised sewage indicted by this factor of the analysis lies the most objectionable feature of the water of the lower Ottawa for domestic use. I do not think that this nitrogenous component is due to sawdust, nor to any other cause than ordinary sewage. The limit of safety in the matter of albuminoid ammonia is fixed by Wanklyn and other authorities at 0·150 per million, a number which is exceeded by the water of the Lake of Two Mountains, both in the present examination and in that of April (see Bulletin 15). It is, however, unwise to press any arbitrary standard too closely, and I cannot, from my knowledge of the history of the Ottawa River water, feel justified in condemning it as dangerous; at the same time, I feel sure that it could be greatly improved by proper treatment, not only in the lower reaches of the river, but at the Ottawa city intake.

The examination of the water supply of Montreal did not properly come under consideration, since this is drawn (see Bulletin 15) from the united waters of the Ottawa and St. Lawrence Rivers in Lake St. Louis. Nevertheless, it was thought well to include the result of analysis of samples taken at lower level reservoir (No. VII) and at a tap in the office of the Collector of Inland Revenue (No. VIII).

These samples, although collected on the same day, show great disparity in the analytical result. In the reservoir we have less total solids with much higher mineral matter, less oxidisable vegetable matter and lower nitrates with more albuminoid ammonia. It is certain that the water in the reservoir is worse than that supplied to the city.

Unless arrangements are made for the periodical and frequent cleaning of reservoirs, it must be evident that they may become dangerous to the health of a city.

A. McGILL, B.A., B.Sc.,
Assistant to the Chief Analyst.

OTTAWA, 15th Sept., 1890.

TABLE I.

Serial Number	Date.	Remarks.
	1890.	
I.	Aug. 18..	From a floating pier in Deschenes Lake, opposite the Deschenes Mills. The water here is 32 feet deep. The sample was taken at 10 to 12 feet below the surface.
II.	do 18..	In Britannia Bay, at a point about 50 feet from the shore, where water is taken by carts for the supply of the village. The water at this spot is from 3½ to 4 feet deep. The sample was taken at about 1 foot below the surface.
III*a*.	do 19..	This and the following three samples were taken in the Ottawa River between New Edinburgh and Gatineau Village. This is below the city sewers about half a mile. This sample was taken off Nepean Point, in water 49 feet deep, at a depth of 10 to 12 feet.
III*b*.	do 19..	Near middle of river, off Nepean Point, at a depth of 10 to 12 feet. No bottom was found at 50 feet.
III*c*.	do 19..	Taken near the Gatineau shore, in water 14 feet deep, at a depth of 7 to 8 feet.
III*d*.	do 19..	Taken a little below the preceding and further out from shore, in water 24 feet deep, at a depth of 10 feet.
IV.	do 20..	From the Laboratory tap, which was allowed to flow freely for three hours before taking the sample.
V.	do 20..	Taken from the pier at the intake end of supply pipe. The water is 12 feet deep. The sample was taken at 8 feet. The city does not yet draw its supply from this point of the river, as a distance of nearly 1,100 feet of pipe has still to be laid. The present supply comes from a point below the Canadian Pacific Ry. bridge.
VI.	do 21..	Taken at St. Anne's, about ¼-mile above the locks, and in a strong current setting in towards the rapids. The water at the place when the sample was taken was 14 feet deep, and the sample was taken in 8 to 10 feet.
VII.	do 22..	From the lower level reservoir, at Montreal, a boat was taken out to the middle of the reservoir. The water was found 26 feet deep; sample taken at about 10 to 12 feet.
VIII.	do 22..	From tap in Gas Inspector's office, Montreal. The tap was turned on and water allowed to run freely for three hours before collecting the sample.
IX.	do 23..	At the Laboratory tap, Ottawa. The water ran freely for three hours before collecting.
X.	do 26..	From the Ottawa river, at Calumet. The sample was taken from the middle of the river, here over 40 feet deep, and at a depth of 15 feet.
XI.	do 26..	From the Ottawa River at Carillon. The sample was taken from the deck of the steam ferry-boat, in the middle of the channel, where a very strong current flows. No bottom was found at 35 feet. The sample was taken at about 12 to 15 feet below the surface.
XII.	do 27..	Taken from the same place as Sample I.

TABLE II—Analytical Results.

Number of Sample.	Source of Sample.	Date of Collection	Colour.				Total Solids. (Parts per Million).		
			Yellow (500)	Red (200).	Grey (30).	Green (700).	Dry at 100° C.	Ignited.	Loss on Ignition.
I.	Deschenes Lake	Aug. 18..	8·0	2·0	1·0	0·5	56·0	28·0	28·0
II.	Britannia Bay	do 18..	8·0	2·0	1·0	0·5	56·0	32·0	24·0
III*a*.	Ottawa River	do 19..	9·0	2·5	0·25	1·0	60·0	32·0	28·0
III*b*.	do	do 19..	.....	.....	.....	.....	56·0	28·0	28·0
III*c*.	do	do 19..	.....	.....	.....	.....	60·0	32·0	28·0
III*d*.	do	do 19..	9·0	2·5	0·25	1·00	72·0	32·0	40·0
IV.	Laboratory supply, Ottawa	do 20..	.....	.....	.....	.....	52·0	28·0	24·0
V.	Projected city intake	do 20..	10 0	2·25	1·25	.....	52·0	30·0	22·0
IV.	St. Anne's	do 21..	10·0	2·25	1·00	0·5	80 0	40·0	40·0
VII.	Lower level reservoir, Montreal	do 22..	5·0	1·5	0·25	0·5	86·0	52·0	34·0
VIII.	City supply, Montreal	do 22..	6·25	2·0	.....	0·75	108·0	32·0	76·0
IX.	Laboratory supply, Ottawa	do 23..	8·00	2·0	1·0	0·0	52·0	28·0	24·0
X.	Ottawa River at Calumet	do 26..	10·00	2·25	2·25	.....	60·0	32·0	28·0
XI.	do Carillon	do 26..	9·0	2·0	2·0	.....	60·0	32·0	28·0
XII.	Deschenes Lake	do 27 :	9·0	2·0	0·5	.....	56·0	28·0	28·0

Number of Sample.	Phenomena on Ignition.	Nitrogen. (Parts per Million.)			Chlorine (parts per Million).	Phosphates.	Oxygen Consumed by Organic Matter at 80° F.		Value.
		As Albumenoid Ammonia.	As Free and Saline Ammonia.	As Nitrates and Nitrites.			15 min.	4 hrs.	
I.	Blackened without scintillation	0·190	0·037	0·133	1·5	v. l. t.	3·800	6·560	191
II.	do do	0·190	0·032	0·198	1·5	v. l. t.	3·800	6·520	191
III*a*.	do do	0·152	0·016	0·144	2·0	v. l. t.	3·800	6·600	186
III*b*.	do do	0·118	0.014	0·076	2·0	v. l. t.	3·800	6·640	183
III*c*.	do do	0·174	0·024	0·046	2·0	v. l. t.	3·800	6·600	188
III*d*.	do do	0·174	0·018	0·077	3·0	v. l. t.	3·800	6·640	188
IV.	do do	0·120	0·021	0·024	1·5	l. t.	3·760	6·440	181
V.	do do	0·124	0·029	0·045	1·5	v. l. t.	3·840	6·440	185
IV.	do do	0·154	0·030	0·015	1·5	v. l. t.	3·532	6·088	176
VII.	Blackened with slight scintillation	0·155	0·018	0·019	2·5	v. l. t.	2·600	4·400	132
VIII.	do do	0·124	0·014	0·036	2·5	v. l. t.	2·680	4·492	132
IX.	Blackened without scintillation	0·130	0·017	0·033	1·5	v. l. t.	3·640	6·280	177
X.	do do	0·154	0·025	0·010	1.5	v. l. t.	3·708	6·412	181
XI.	do do	0·142	0·029	0·026	1·5	l. t.	3·748	6·412	182
XII.	do do	0·154	0·019	0·058	1·5	v. l. t.	3·760	6·480	184

TABLE III.—Synthetical.

—	SOURCE.	No. of Sample.	Date of Collection.	SOLIDS.			Phenomena on Ignition.	NITROGEN.			Chlorine.	Phosphates.	OXYGEN CONSUMED.	
				Dry at 100° C.	On Ignition	Loss on Ignition		As Albumenoid Ammonia.	Free and Saline Ammonia.	As Nitrates and Nitrites			15 min.	4 hrs.
A.	Deschenes Lake.	I XII	Aug. 18 do 27	56·0 56·0	28·0 28·0	28·0 28·0	Blackened do	0·190 0·154	0·037 0·019	0·133 0·058	1·5 1·5	v. l. t.* v. l. t.	3·800 3·760	6·560 6·480
	Mean.			56·0	28·0	28·0	Blackened	0·172	0·028	0·096	1·5	v. l. t.	3·780	6·520
B.	Ottawa River, present supply of Ottawa city.	IV IX	Aug. 20 do 23	52·0 52·0	28·0 28·0	24·0 24·0	Blackened do	0·120 0·130	0·021 0·017	0·024 0·033	1·5 1·5	v. l. t. v. l. t.	3·760 3·640	6·440 6·280
	Mean.			52·0	28·0	24·0	Blackened	0·125	0·019	0·029	1·5	v. l. t.	3·700	6·360
	Above Chaudière Falls.	V	Aug. 20	52·0	30·0	22·0	Blackened	0·124	0·029	0·045	1·5	v. l. t.	3·840	6·440
	Mean of Ottawa river water above the Falls			52·0	28·7	23·3	Blackened	0·125	0·022	0·034	1·5	v. l. t.	3·747	6·387
C.	Ottawa River, at a point immediately below sewer mouth.	III *a.* III *b.* III *c.* III *d.*	Aug. 19 do 19 do 19 do 19	60·0 56·0 60·0 72·0	32·0 28·0 32·0 32·0	28·0 28·0 28·0 40·0	Blackened do do do	0·152 0·118 0·174 0·174	0·016 0·014 0·024 0·018	0·144 0·076 0·046 0·077	2·0 2·0 2·0 3·0	v. l. t. v. l. t. v. l. t. v. l. t.	3·800 3·800 3·800 3·800	6·600 6·640 6·600 6·640
	Mean.			62·0	31·0	31·0	Blackened	0·155	0·018	0·086	2·25	v. l. t.	3·800	6·620
	Differences between B and C to show the immediate effect of the sewage pollution.			10·0	2·3	7·7		0·030	0·004 decrease	0·052	0·75		0·053	0·233
D.	Ottawa River between Grenville and Carillon.	X XI	Aug. 26 do 26	60·0 60·0	32·0 32·0	28·0 28·0	Blackened do	0·154 0·142	0·025 0·029	0·010 0·026	1·5 1·5	v. l. t. l. t.	3·708 3·748	6·412 6·412
	Mean of Ottawa river water below the Falls			60·0	32·0	28·0	Blackened	0·148	0·127	0·017	1·5	v. l. t.	3·728	6·412
E.	Lake of Two Mountains, at head of St. Anne's Rapids.	VI	Aug. 21	80·0	40·0	40·0	Blackened	0·154	0·030	0·015	1·5	v. l. t.	3·532	6·088
F.	Montreal water supply.	VII VIII	Aug. 22 do 22	86·0 108·0	52·0 32·0	34·0 76·0	Blackened with scintillation.	0·155 0·124	0·018 0·014	0·019 0·036	2·5 2·5	v. l. t. v. l. t.	2·600 2·680	4·400 4·492
	Mean.			95·5	42·0	55·0	Blackened with scintillation.	0·139	0·016	0·027	2·5	v. l. t.	2·640	4·446

* v. l. t. means very light traces.

REPORT UPON THE WATER SUPPLY OF THE CITY OF SHERBROOKE, QUE.

Table I exhibits the numerical results of analysis.

Table II contains a list of the samples taken, together with details regarding the source of each.

The city supply is taken from the River Magog, an intake pipe, partly of iron and partly of wood, being carried out from the pumping station to the river, the intake end of the pipe reaching to the middle of the stream nearly opposite Queen street, a distance of perhaps 1,800 feet from the pump house. The water at this point was 19 feet deep on the 3rd of September, when I took a sample there. The pipe, originally of iron throughout its whole length, has comparatively lately had an addition of about 400 feet of wooden pipe added to it, in order to obtain a supply for the city beyond a point in the river which is often covered by saw-logs. Sample No. 3 was taken near the joint between the old and new portions of the pipe in order to detect any leakage, if such occurred. The results of analysis show the water at this point to be practically identical with that at the intake end of the pipe, except only that the vegetable organic matter here is rather higher than at the intakeFor purposes of comparison I obtained a sample of water from Lake Memphremagog, and I find that the water of the river differs but little from that of the lake, the differences being a slight increase of albuminoid nitrogen and a decided increase in oxidisable organic matter, almost entirely vegetable, as the history of the river shows. The water as furnished to the city (see Sample 6) agrees very well in general character with that of the supply, and at the time when those samples were collected was, as shown by the analysis, of fairly satisfactory and unobjectionable quality.

The water of the reservoir is not identical with that supplied to the city, the albuminoid ammonia and the nitrates are much higher in amount, and the organic matter oxidisable by peranganic acid is considerably lower. It is evident that the water ordinarily supplied to the consumers does not come from the reservoir.

Well Waters.

A considerable number of wells are in use in outlying parts of the city. Samples were taken at three of these wells, which were stated to furnish water to a large number of families. Sample 7 was taken from a well which gave every evidence of being much resorted to by the people of the neighbourhood. The accesses to it were open and were well tracked. The analytical results are such as to justify me in condemning its use for drinking purposes. The very large amount of nitrogen as albuminoid ammonia, with the high nitrates, chlorides and organic matter, proved that surface drainage finds entrance to it.

Sample 8, from a well at Peter Happy's Hall, is if possible still worse. The amount of free and saline ammonia found exceeds anything which I have before this detected in a water used for drinking purposes; indeed, it is seldom that fresh sewage contains so much. (See Bulletin 13, page 14, Samples 44 and 45.) This, together with the excessive total solids, nitrates and chlorides, compels unhesitating condemnation of the well. In the case of the last well examined, which is scarcely so much a well as a flowing spring whose waters are allowed to collect in a barrel sunk in the ground, the excess of water constantly flowing over the top, the results are less positively condemnatory. The nitrogen in nitrates is, however, much too high; and the chlorine in chlorides can scarcely otherwise be accounted for than as owing its presence to sewage. The geological character of the surrounding country precludes the idea of a purely mineral origin for the chlorides, and the immediate environment of the well, taken in connection with the high nitrates found, suggests unmistakably a sewage origin. There can be no doubt as to the necessity which exists for the discontinuance of the use of all these well waters.

(Signed) A. McGILL, B.A., B.Sc.,
Assistant to Chief Analyst.

OTTAWA, 18th September, 1890.

TABLE I.—Sherbrooke Water Supply.

No. of Sample.	SOURCE.	Date of Collection of Sample.	COLOUR, LOVIBOND'S SCALE.		TOTAL SOLIDS. — (Parts per Million).			PHENOMENA ON IGNITION.	NITROGEN. — (Parts per Million).			Chlorine in Chlorides (per Million).	Phosphates.	OXYGEN CONSUMED BY ORGANIC MATTER, AT 80° F., IN		Valuation Wigner's Scale Modified. Bulletin 5.
			Yellow (500).	Red (200).	Dry at 100° C.	Ignited.	Loss on Ignition.		As Albumenoid Ammonia.	As Free and Saline Ammonia.	As Nitrates and Nitrites.			15 min.	4 hours.	
1	Lake Memphremagog..	Sept. 2.	1·625	0·25	94	64	30	Blackened	0·104	0·010	0·105	1·0	v. l. t...	1·312	2·744	73
2	Magog River	do 2.	2·0	0·5	72	44	28	do	0·090	0·014	0·056	1·0	v. l. t...	1·604	2·644	81
3	Joint of old and new intake pipe.	do 3.	2·75	0·75	80	52	28	do	0·118	0·006	0·044	1·0	l. t.....	1·808	2·948	93
4	Intake pipe............	do 3.	2·75 + green	0·75 = 0·5	80	52	28	do	0·126	0·006	0·044	1·0	v. l. t...	1·896	3·084	98
5	Reservoir.............	do 3.	1·625	0·25	72	48	24	do	·0·162	0·016	0·117	1·0	v. l. t...	1·272	2·096	73
6	Tap at Central Fire Station.	do 3.	2·75 + green	0·75 = 0·5	90	64	26	do	0·130	0·005	0·050	1·0	v. l. t...	1·744	3·164	93*
7	Well, corner of Liverpool and London Sts.	do 3.	4·25 + green	0·5 = 0·5	8·48	628	220	Blackened with smoke and scintillation.	0·538	0·032	5·010	120·0	tr.....	2·848	5·388	225
8	Well at Peter Happy's Hall.	do 3.	0·75 + grey	.... = 0·25	1112	640	472	Blackened.....	0·218	11·190	5·910	260·0	l. t.....	0·552	1·552	337
9	Well at Mrs. Millar's ..	do 3.	0·5 + blue	.... = 0·5	416	260	156	Blackened slightly ..	0·100	0·032	5·816	36·0	tr. .	0·500	0·920	53

* Total hardness is 2·55°, *i.e.* 2·55 grains of carbonate of lime, or its equivalent in earthy salt, per gallon.

TABLE II.

SHERBROOKE Water Supply.

No. of Sample.	Date of Collection	Source.	Remarks.
	1890.		
I.	Sept. 2..	Lake Memphremagog....	Taken from the lower end of the lake, about half a mile from shore. The water here is 14 feet deep. The sample was taken about 8 feet below the surface.
II.	do 2..	Magog River.	Taken from the middle span of a bridge situate about half a mile below the Hochelaga Cotton Mills. The water is about 5 to 6 feet deep, and the sample was obtained at 2 to 3 feet below the surface. The current is very rapid at this point.
III.	do 3..	do	Near the city of Sherbrooke, at near the joint between the old and new portions of the intake pipe supplying the city. The water is about 4 feet deep, and the sample was taken at about 3 feet below the surface.
IV.	do 3..	do	At the end of the new intake pipe. The water here is 19 feet deep. The sample taken at about 12 feet deep.
V.	do 3..	Reservoir.........	By reaching out into the reservoir from a rock projecting about 4 feet within the boundary wall. The water here is 3 to 4 feet deep. Sample taken about 6 inches below the surface.
VI.	do 3..	Tap at Central Fire Station.	The tap was allowed to run freely for three hours before collecting.
VII.	do 3..	Well........	Situate at corner of Liverpool and London streets. The well is covered by a box with a lid. Water is drawn by letting down a pail by means of a forked stick. The well is about 10 feet deep, and contained about 7 feet of water. The sample was taken about 3 to 4 feet below the surface.
VIII.	do 3..	do	In front of Peter Happy's Hall. This well was apparently covered in with care, and had a good pump.
IX.	do 3..	do (spring).....	At Mrs. Millar's. A spring flows into a barrel sunk in the ground. The barrel is open, and a considerable overflow of remarkably clear water was observed.

BULLETIN No. 19—MUSTARD.

E. MIALL, Esq.,
Commissioner of Inland Revenue.

SIR,—In many of the reports which have been addressed to you by the public analysts of the Dominion during the past ten years, and which are to be found published in the annual reports of the Department, there is abundant evidence to show that mustard, as sold in Canadian markets, is largely subject to adulteration—in fact, it may be said that it is hardly ever sold pure. Some people assert that the public have come to understand that it is just as well that this state of affairs should continue to exist, and that so long as the mustard contains nothing injurious, and is marked or sold as "compound," the said public has not much to complain of. On the other hand, it may be maintained, as in the case of coffee, spices, &c., that some limit should be set to the amount of diluting substances added; and, in order that arrangements may be made for having this done, with due regard to the position of both vendor and purchaser, I have to call your attention to some analytical work which has been done on samples of mustard collected during the last eighteen months.

The nature and origin of these samples and the results of their analysis are given in the following table (I).

I.—TABLE showing the Origin and Composition

Date of Collection.	Number of Sample.	Description. of Mustard.	Name and Address of		Quantity.	Price.
			Vendor.	Manufacturer as given by Vendor.		
1889.			HAMILTON.			Cents.
June 18..	6714	Mustard Compound.	John J. Watt....... ..	W. G. Dunn & Co., Hamilton	1 lb...	30
do 18..	6715	Double Superfine..	do	J. J. Colman, London Eng..	3 pkgs	45
do 18.	6716	do ..	do	Keen, Robinson & Co., London, Eng.	1 lb...	45
do 18..	6717	do ..	Carpenter Bros.........	F. F. Dally & Co., Hamilton	3 pkgs	30
do 18..	6718	Compound.........	Cyrus King.............	Durkee, New York..........	3 do	30
do 18..	6722	Morton's Celebrated London.	R. C. Cooper...........	W. H. Gillard, Hamilton...	3 do	30
do 18..	6723	Superior English Mustard.	Lumsden Bros..........	Weston & Bodin, Hamilton.	3 do	20
do 18..	6724	Pure Durham Mustard.	W. H. McLaren........	Hamilton Coffee and Spice Mills.	3 do	30
			INGERSOLL, ONT.			
do 21..	6725	General Double Superfine.	Thos. Pardox.........	Remington & Co., Selby, Eng	3 do	37
do 21..	6726	Pure Mustard....	S. Little.............	Gorman, Dyson & Co., London, Ont.	1 lb...	40
do 21..	6727	Compound	do	do do .	3 pkgs	30
			WOODSTOCK, ONT.			
do 21..	6728	do	W. H. Wilson..........	Hugherson & Ferrier, London, Ont.	1 lb...	30
do 21..	6729	Second Quality....	do	Keen, Robinson & Co., London, Eng.	3 pkgs	30
do 21..	6730	Compound	Jury & Harwood.... ...	Mayell & Co., London, Ont.	1 lb...	30
			TORONTO.			
June 24..	6731	Mustard Compound.	Wm. Dyson, 102 Niagara Street.	James Watson, Bay Street..	3 pkgs	30
do 24..	6732	do ..	do ..	Empire Mills, Toronto......	1 lb ..	25
do 24..	6733	do ..	J. Cook, 595 King Street	Ellis & Keighley, Toronto...	do ..	30
do 24..	6734	do ..	Wm. McMurchy, 581 King Street.	Pure Gold Manufacturing Co., Toronto.	3 pkgs	30
do 24..	6735	Choice Condiment.	Mrs. S. Sim, 115 Spadina Avenue.	J. J. Colman, London, E....	do ..	30
do 24..	6736	Mustard.... ...	do ..	E. Blaine & Co., Toronto....	1 lb ..	30
do 24..	6737	Double Superfine..	S. Timonsky, 338 Queen Street.	Pure Gold Manufacturing Co., Toronto.	3 pkgs	36
do 24..	6738	Compound	T. Guay, 306 Queen Street, W.	Ellis & Keighley, Toronto...	do ..	30
do 24..	6739	do	Phil. Hire, 172 Queen Street, W.	Todhunter & Mitchel, Toronto.	1 lb ..	25

of 95 samples Commercial Mustard.

Results of Analysis—per cent.									Name of Analyist.	Remarks.
Ash.				Moisture and Loss at 100° C.	Extracts.		Sulphur.	Nitrogen.		
Total.	Soluble in Water.	Insoluble in Water.	Insoluble in Hydrochloric Acid.		By Petroleum Ether—Fixed Oil	By Alcohol of 84 p. c.				
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
2·85	0·75	2·10	......	9·55	7·10	......	....	3·04	Dr. W. H. Ellis	Adulterated by admixture with about 45 p. c. of flour. A portion of the oil has been removed.
4·05	1·90	2·15	......	4·75	34·20	.....	....	4.35	do ...	A mixture of ground mustard with about 6 p. c. flour.
4·40	1·85	2·55	......	5 50	33·60	......	....	4·54	do ...	A mixture of ground mustard with about 4 p. c. flour.
18·40	4·10	14·30	......	5·40	9·50	......	....	2·62	do ...	Adulterated by admixture with about 36 p. c. flour and about 16 p. c. of gypsum.
2·45	0·60	1·85	......	8·80	5·60	......	....	2·60	do ...	Adulterated by admixture with about 53 p. c. of flour.
4·70	1·50	3·20	......	6·10	12·30	......	...	3·61	do ...	Adulterated by admixture with about 36 p. c. of flour.
15·50	2·55	12·95	.....	4·75	12·00	.....	. ..	3·32	do ...	A mixture of ground mustard cake with about 29 per cent. of flour.
29·85	1·20	28·65	.....	4·55	7·40	......	....	2·34	do ...	Adulterated by admixture with about 27 p. c. of clay and 31 p. c. of flour.
4·30	1·40	2·90	...	5·00	25·35	......	....	4·04	do ...	A mixture of ground mustard cake with about 19 per cent. of flour.
9·40	1·65	7·75	....	5 15	20·00	......	....	5·00	do ...	Is composed of mustard cake.
15·80	2·90	12·90	......	4·75	12·10	......	....	3·84	do ...	Adulterated by admixture with about 12 p. c. of gypsum and 23 p. c. of flour.
14·70	2·90	11·80	.....	5·45	7·35	.. ..	...	2·50	do ...	Adulterated by admixture with about 12 p. c. of gypsum and 43 p. c. of flour.
3·25	0·90	2·35	......	5·65	22·00	......	....	3·42	do ...	A mixture of ground mustard with about 29 p. c. of flour.
15·70	3·00	12·70	....	4·95	13·35	......	....	3·80	do ...	Adulterated by admixture with about 12 p. c. gypsum and about 22 p. c. flour.
3·05	1·15	1·90	.....	3·35	6·80	. ....	....	3·36	do ...	Adulterated by admixture with about 45 p. c. flour.
3·95	1·00	2·95	......	6·90	8·05	......	....	3·94	do ..	do 35 do
3·30	0·75	2·55	......	6·45	6·35	......	....	3·42	do ..	do 45 do
4·60	1·10	3·50	.... .	7·00	9·25	. ..	....	3·40	do ..	do 41 do
3·20	0·90	2·30	......	6·20	22·80	......	....	3·86	do ..	A mixture of ground mustard, with about 22 p. c. of flour.
15·25	0·70	14·55	.... ..	5·95	8·70	.....	....	2·82	do .	Adulterated by admixture with about 12 p. c. of gypsum and about 37 p. c. flour.
4·95	1·30	3·65	......	5·30	23·65	......	....	4·92	do ..	A mixture of mustard cake with about 9 p. c. flour.
3·15	0·85	2·30	.....	8·65	7·90	...	....	3·56	do ..	Adulterated by admixture with about 39 p. c. flour.
18·15	3·85	15·00	.....	5·85	10·40	... ..	....	2·76	do ..	Adulterated by admixture with about 16 p. c. gypsum and about 33 p. c. flour.

I.—Table showing the Origin and Composition

Date of Collection.	Number of Sample.	Description of Mustard.	Name and Address of Vendor.	Name and Address of Manufacturer as given by Vendor.	Quantity.	Price.
1889.			St. John, N.B.			Cents.
Nov. 19..	8753..	Mustard..........	A. P. Tippett & Co., 3 & 4 North Wharf.	Keen, Robinson & Co., London, Eng.	¾ lb..	33
do 19..	8754..	do	Geo. S Parker, 10 Water Street.	Irwin, Bruce & Co., London, Eng.	do ..	30
			Woodstock, N.B.			
do 19..	8759..	do	A. J. Marsten, Main Street.	....	do ..	15
			Fredericton, N.B.			
do 19..	8762..	do	W. Guion, 7 York Street.	Keen, Robinson & Co., London, Eng.	do ..	30
			Marysville, N.S.			
do 19..	8765..	do	Alex. Gibson.	Colman, London, Eng......	do ..	36
			Guelph, Ont.			
do 19..	6800..	Mustard compound	George Williams...... . .	Snow Drift Co., Brantford, Ont.	3 pkgs	30
			Galt, Ont.			
do 19..	9505..	do ..	W. P. Clay.............	John Davis & Co., Windsor, Ont.	1 lb..	30
			Barrie, Ont.			
do 19..	9508..	do ..	J. M. Bothwell.........	Jardine & Co., Toronto......	do ..	25
			Toronto.			
do 19..	9515..	do ..	K. Holywell, 164 King Street, W.	Ellis & Keighley, Toronto...	do ..	25
do 19..	9518..	do ..	David Killon, 155 King Street, W.	Keen, Robinson & Co., London, Eng.	do ..	30
1890.			Brantford, Ont.			
Jan. 23..	9540..	Must	A. Q. Vanstone.........	J. J. Colman, London, Eng.	3 pkgs	37
do 23..	9541..	do	do	Keen, London, Eng........	do	45
do 23..	9542..	do	do	W. H. Gillard & Co., Hamilton, Ont.	do	30

of 95 samples Commercial Mustard—*Continued.*

RESULTS OF ANALYSIS—PER CENT.									Name of Analyst.	Remarks.
Ash.				Moisture and Loss at 100° C.	Extracts.		Sulphur.	Nitrogen.		
Tota.	Soluble in Water.	Insoluble in Water.	Insoluble in Hydrochloric Acid.		By Petroleum Ether—Fixed Oil	By Alcohol of 84 p. c.				
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
4·05	1·4	2·65	......	6·65	34·4	......	....	4·4	Dr. W.H.Ellis	Mixed with less than 4 p.c. flour.
4·85	1·32	3·52	....	9·00	11·7	......	....	3·28	do ...	Adulterated by admixture with about 38 p.c. flour and turmeric.
5·00	1·4	3·6	......	6·1	10·95	......	...	2·49	do ...	Adulterated with about 51 p.c. flour and turmeric.
3·3	0·75	2·55	....	4·75	16·9	......	....	3·28	do ...	Adulterated with about 37p.c flour
3·1	1·05	2·05	......	6·00	21·7	......	....	4·03	do ...	Adulterated with about 23 p.c. flour.
3·95	0·18	3·77	0·57	7·51	12·18	.....	0·75	....	A. L. Tourchot	Adulterated with wheat flour and turmeric.
16·89	3·56	13·33	0·54	10·10	5·54	......	1·37	....	do ...	Adulterated with wheat flour, turmeric and terra alba.
19·99	2·70	17·29	1·89	10·23	7·71	......	1.18	....	do ...	do do
2·99	traces	2.99	0·27	8·63	5·68	.....	0 82	...	do ...	Adulterated with wheat flour and turmeric.
2·75	0·42	2·33	0·06	6·95	20·78	......	1·09	....	do ...	Adulterated with wheat flour and turmeric, and perhaps foreign oil.
2·95	0·30	2·65	.....	6·50	24·20	....	....	3·41	Dr. W.H.Ellis	Adulterated with about 25 p.c. of wheat flour and turmeric.
3·92	0·25	3·67	....	5·77	32·55	......	....	4.75	do ...	Genuine mustard, with very little wheat flour.
3·45	0·25	3·20	......	8·20	8·20	......	....	3·08	do ...	Adulterated by admixture with about 40 p.c. of wheat flour and turmeric.

I.—TABLE showing the Origin and Composition

Date of Collection.	No of Sample.	Description of Mustard.	NAME AND ADDRESS OF		Quantity.	Price.	Total.
			Vendor	Manufacturers as given by Vendor.			
1890.			BRANTFORD, ONT.			cts.	p. c.
Jan. 23.	9543	Mustard	A. Harrington	Essex Mustard Manufacturing Co., London, E.	3 pkgs	30	3·10
do 23.	9544	do	Co-operative store	The A. Colburn Co., Philadelphia, U.S.A.	do ..	45	6·35
			LONDON, ONT.				
do 29.	9545	do compound.	Wm. Connor	Gorman, Dyson & Co., London, Ont.	do ..	30	16·30
do 29.	9547	do	A. McCormick & Son....	T. M. Mayell & Co., London, Ont.	do ..	30	13·45
do 29.	9548	do sold as pure	do	do do ..	1 lb ..	30	8·05
do 29.	9549	do compound.	do	Essex Mustard Manufacturing Co., London, E.	do ..	20	23·67
			WOODSTOCK, ONT.				
do 30.	9550	do do ..	A. J. McKay.....	Moss Remington, Selby, Eng.	3 pkgs	45	3·55
do 30.	9551	do fine mustard compound.	do	T. B. Escott, London, Ont..	do ..	30	3·90
do 30.	9552	Mustard, compou'd	do	Gorman, Dyson & Co., London, Ont.	1 lb ..	40	14·65
do 30.	9553	do Durham Mustard Com'd.	J. Kelly............ ...	Barton, Son & Co., Toronto.	3 pkgs	25	3·40
do 30.	9554	Choice Durham...	Butler & Co...........	Edward Adams & Co., London, Ont.	1 lb ..	20	14·20
			ST. JOHN, N.B.				
July 28.	9846	Mustard "Absolutely Pure."	Dearborn & Co., 95 Prince William Street	The A. Colburn Co., Philadelphia, Pt.	½ lb ..	20	5·85
do 28.	9847	"Superfine Mustard Compound," Durham.	F. Godard, 32 Water St..	S. H. & A. S. Ewing, Montreal.	1 lb ..	27	3·57
do 28.	9848	"Imperial Mustard," Crown Brand.	Geo. S. DeForest & Son, 13 South Wharf.......	Irwin, Bruce & Co., London, E.	½ lb ..	15	8·47
do 28.	9849	"Acme Mills Mustard," an admixture of pure mustard with choice condiments.	Geo. Morrison, jr., 15 and 16 South Wharf.	C. A. Lifton & Co., Montreal	do ..	15	4·47
July 29.	9850	"Keen's Mustard," double superfine compound.	A. P. Tippet & Co., 4 North Wharf.	Keen, Robinson & Co., London, E.	¼ lb ..	7	4·11
do 29.	9852	"Superfine Durham Mustard Compound."	Jardine & Co., 28 Water Street.	Pure Gold Manufacturing Co., Toronto.	½ lb ..	16	8·69
do 30.	9855	Colman's Mustard; fine, "an admixture."	Wm. Kennedy, 63 King Street.	J. & J. Colman, London, E.	do ..	20	3·37

of 95 samples Commercial Mustard—*Continued.*

RESULTS OF ANALYSIS—PER CENT.

Ash.			Moisture and Loss at 100°C.	Extracts.		Sulphur.	Nitrogen.	Probable amount of Pure Mustard.	Name of Analyst.	Remarks.
Soluble in Water.	Insoluble in Water.	Insoluble in Hydrochloric Acid.		By Petroleum Ether—Fixed Oil	By Alcohol, 84 p. c.					
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
1·75	1·35	.....	9·30	12·25	.....	....	2·49	.....	Dr. W.H.Ellis	Adulterated by admixture of about 45 p. c. flour.
1·10	5·25	......	5·65	22·90	......	....	4·76	......	do ..	Mustard cake mixed with about 10 p. c. flour and turmeric.
2·80	13.50	....	5·90	12·40	......	....	4·03	.....	do ..	Adulterated, being mustard cake mixed with about 30 p. c. of flour, and 10 p. c. terra alba—Is injurious to health.
2·00	11·45	.....	6·05	14·10	.....	....	4·20	....	do ..	Adulterated by admixture with about 10 p. c. terra alba and about 15 p. c. flour—Is injurious to health.
0·95	7·10	......	15·05	21·30	.....	....	6·15	.....	do ..	Mustard cake.
0·75	22·92	.....	5·57	7·40	.....	....	2·72	.....	do ..	Adulterated with about 30 p. c. flour and about 20 p. c. clay—Is injurious to health.
0·65	2·90	......	6·55	18·45	......	..	4·14	.....	do ..	A mixture of mustard cake, flour and turmeric.
1·45	2·45	......	7·65	9·92	.....	....	3·30	......	do ..	Adulterated by admixture with wheat flour and turmeric.
3·80	11·85	.....	5·00	13·85	.....	....	4·17	......	do ..	Adulterated by admixture with about 10 p. c. terra alba and 16 p. c. flour—Is injurious to health.
0·70	2·70	......	7·95	7·95	......	....	3·42	.....	do ..	Adulterated by admixture with about 40 p. c. wheat flour and turmeric.
3·05	11·15	.....	5·85	9·10	......	..	2·83	......	do ..	Adulterated by admixture with about 38 p. c. flour and about 10 p. c. terra alba—Is injurious to health.
										Microscopical Examination.
0·75	5·10	0·87	7·02	20·64	17·54	1·24	6·01	70-75	F. W. Babington.	Mustard, turmeric and buckwheat or rice flour.
0.92	2·65	0·75	11·69	5·80	7·67	0·30	2·73	20-30	do ..	Mustard, wheat flour, turmeric, buckwheat or rice and cayenne.
1·45	7·02	1·15	8·67	10·51	9·54	1·37	3·40	30-40	do ..	Mustard, wheat flour, turmeric, buckweat, cayenne and mustard husks, a little gypsum.
0·87	3·60	0·80	10·08	5 74	10·04	0·23	3·44	20-25	do ..	Mustard, wheat flour, turmeric, buckwheat or rice and mustard husks.
1·11	3·00	0·10	7·44	29·71	18·73	0·93	4·39	90-100	F. W. Babington.	Mustard, wheat flour, a little turmeric and mustard husk.
1·54	7·15	0·70	8·89	7·40	7·40	1·40	3·00	30-35	do ..	Mustard, wheat flour, turmeric and cayenne; a little gypsum.
1·10	2·27	0·10	6·81	21·56	13·69	0·90	4·15	70-80	do ..	Mustard, wheat flour, turmeric and mustard husk.

I.—TABLE showing the Origin and Composition

Date of Collection.	No. of Sample.	Description of Mustard.	NAME AND ADDRESS OF		Quantity.	Price.	
			Vendor.	Manufacturer as given by Vendor.			Total.
1890.			MONCTON, N.B.			Cts.	
Aug. 7.	9856	Durham Mustard Compound.	W. O. Schwartz, Main Street.	F. F. Dalley & Co., Hamilton, Ont.	do ..	20	2·70
do 7.	9857	Extra genuine mustard; guaranteed strictly pure.	A. Girvan, 299 Main Street.	Pure Gold Manufacturing Co., Toronto.	do ..	24	5·77
do 7.	9858	London Mustard; "an admixture."	Webb & McHaffie, 314 Main Street.	J. & J. Colman, London, E.	do ..	20	3·00
do 7.	9859	Mustard; loose ..	J. M. Wallace & Co., 209 Main Street.	Cole & Firth, London, E....	do ..	15	7·12
do 7.	9860	Superfine Mustard, Durham compound.	Simon Melanson, 92 Main Street.	Dearborn & Co., St. John, N.B.	do ..	20	7·80
do 7.	9861	Durham Mustard, superfine.	Robertson & Givan, 106 Main Street.	S. H. & A. S. Ewing, Montreal.	do ..	20	18·35
			DORCHESTER, N.B.				
do 9.	8862	Mustard; loose...	S. Leslie Chapman, Dorchester Corner.	Dearborn & Co., St. John, N.B.	do ..	15	4·50
do 9.	9863	do ...	Mrs. E. V. Godfrey, Sackville Street.	J. & J. Colman, London, E.	do ..	15	3·05
do 9.	9864	Imperial Mustard; Crown Brand.	M. R. Dobson	Irvine, Bruce & Co., London, E.	do ..	15	8·15
do 9.	9865	Keen's Second Quality Mustard; fine Durham.	F. C. Palmer & Co., Main Street.	Keen, Robinson & Co., London, E.	do ..	20	2·95
			SACKVILLE, N.B.				
do 11.	9866	Mustard; loose...	J. E. Hickey, Main Street.	Keen, Robinson & Co., London, E.	do ..	20	3·50
do 11.	9867	Colman's Mustard; fine, "an admixture."	G. J. Trueman, Bridge Street.	J. & J. Colman, London, E.	do ..	24	3·27
do 11.	9868	Mustard; loose...	C. W. Knapp, Bridge Street.	Dearborn & Co., St. John, N. B.	do ..	15	6·00
			AMHERST, N.B.				
do 11.	9869	London Mustard; "an admixture."	Barry D. Bent, Victoria Street.	J. & J. Colman, London, E.	¾ lb ..	30	3·05
do 11.	9870	Acme Mills Mustard; fine Durham, "an admixture."	Rufus Embree, Victoria Street.	Acme Mills, Montreal.....	do ..	30	3·71
do 11.	9871	Mustard; loose...	A. M. Freeman, Victoria Street.	Keen, Robinson & Co., London, E.	do ..	27	3·05
do 11.	9872	Trade Mills Mustard; fine Durham, "an admixture."	B. W. Ralston, Victoria Street.	Bourgeau & Heron, Montreal.	do ..	36	4·42
			TRURO, N.S.				
Aug. 12.	9873	Mustard, S. F ...	Black & Co., 29 Prince Street.	Pure Gold Manufacturing Co., Toronto.	¾lbs..	30	13·62

of 95 samples Commercial Mustard—*Continued.*

Results of Analysis—per cent.									Name of Analyst.	Remarks.
Ash.				Extracts.						
Soluble in Water.	Insoluble in Water.	Insoluble in Hydrochloric Acid.	Moisture and Loss in 100° C.	By Petroleum Ether—Fixed Oil.	By Alcohol, 84 p. c.	Sulphur.	Nitrogen.	Probable amount of Pure Mustard.		
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
0·70	2·00	0·17	9·65	6·56	7·13	0·27	3·43	20–30	F. W. Babington...	Mustard, wheat flour, turmeric, buckwheat or rice, cayenne and mustard husk.
1·02	4·75	0·50	7·82	18·56	21 38	1·08	5·50	60-70	do ..	Mustard cake, turmeric and mustard husk; probably cake.
0·58	2·42	0·10	8·43	18·18	12·92	0·70	3·83	60–70	do ..	Mustard, wheat flour, turmeric, buckwheat or rice and mustard husk.
0·90	6·22	2·30	9·44	11·50	9·99	0·52	3·52	35 45	do ..	Mustard. wheat flour, turmeric, buckwheat or rice and mustard husk; a little clay.
0·90	6·90	1·95	9·74	10·36	11·25	0·70	3·63	30-40	do ..	Mustard, wheat flour, turmeric, buckwheat or rice and cayenne, mustard husk; a little clay.
4·13	14·22	1·70	10·62	5·90	6 14	3·55	2·59	20-25	do ..	Mustard, wheat flour, turmeric. buckwheat or rice; about 15 to 20 p. c. gypsum.
0·90	3·60	0·40	8·92	9·65	10·46	0·61	3·21	30–40	do ..	Mustard, wheat flour, turmeric, buckwheat or rice and mustard husk.
0·60	2·45	0·07	7·34	17·96	15·49	0·73	3·65	60–70	do ..	do do
1·05	7 10	2 12	7·97	11·85	10·45	1·00	3·63	40–50	do ..	Mustard, wheat flour, turmeric, buckwheat or rice and mustard husk; a little clay.
0·85	2·10	0·15	8·48	18·41	10·60	0·92	3·40	60–70	do ..	do do
1·08	2·42	0·10	6·86	18·41	15·27	1·00	4·87	60–70	do ..	do do
1·10	2·17	0·12	6·43	24·44	14·67	1·06	4·21	80-90	do ..	do do
1·43	4·57	0·47	8·60	10·62	12·78	0·70	3·88	30-40	do ..	Mustard, wheat flour, turmeric, buckwheat or rice, cayenne and mustard husk.
0·73	2·32	0·10	8·50	18 75	14·83	0·94	3·46	60-70	do ..	Mustard, wheat flour, turmeric, buckwheat or rice and mustard husk.
1·34	2·37	0·30	9·77	5·31	7·30	0·47	3·73	20–25	do ..	do do
0·65	2·40	0·07	7·42	19·48	12·21	1·00	3·90	70-80	do ..	do do
0·70	3·72	0·77	10·32	5 53	8·39	0·77	2·60	20–25	do ..	do do
.... .	......	....	5·59	9 85	......	1·93	....	......	Maynard Bowman.	Mixed starches, turmeric; over 8 p.c. calcium sulphate; adult'ed.

I.—TABLE showing the Origin and Composition

Date of Collection.	No. of Sample.	Description of Mustard.	NAME AND ADDRESS OF		Quantity.	Price.	Total.
			Vendor.	Manufacturer as given by the Vendor.			
1890.			TRURO, N.S.			cts.	
do 12.	9874	do 2nd quality.	R. J. Turner, Victoria Street.	Keen, Robinson & Co., London, E.	¾lbs..	30	2·94
do 12.	9875	Mustard, Acme Mills.	Judson & Hanson, 31 Prince Street.	C. A. Liffiton, 329 St. James Street, Montreal.	do ..	30	3·40
do 13.	9876	Mustard; fine....	G. J. McLeod, 164 Prince Street.	J. & J. Colman, London, E.	do ..	36	3·28
			HALIFAX, N.S.				
do 14.	9877	Mustard; superfine	J. Scott & Co., 118 Granville Street.	do ..	do ..	36	3·39
do 14.	9878	Mustard; 2nd quality.	M. H. Ruggles & Co., 123 Argyle Street.	Keen, Robinson & Co., London, E.	do ..	30	3·02
do 14.	9879	....	John Ead, 236 Upper Water Street.	Pure Gold Manufacturing Co., Toronto.	do ..	30	5·21
do 14.	9880	Mustard; fine Durham.	John Cronan, 103, Upper Water Street.	Bourgeau & Heron, Toronto	do ..	27	4·16
do 14.	9881	....	Mary Carroll, 198 Grafton Street.	Acme Mills, Montreal...	do ..	30	3·45
do 15.	9883	Mustard; extra genuine.	W. H. Stimpson, 108 Barrington Street.	The A. Colborn Co., Philadelphia.	do ..	45	6·40
do 15.	9884	Mustard; bulk....	R. T. Forristall, 46 Birmingham St.	J. & J. Colman, London, E.	do ..	24	2·89
do 15.	9885	do	W. C. Nisbet, Morris and Hollis Streets.	Keen, London.............	do ..	21	2·83
do 15.	9886	Mustard; D.S.F.	Brown & Webb........	do	do ..	38	3·82
do 15.	9888	Mustard; fine Durham.	W. Muir & Son, 151 Lower Water Street.	Bourgeau & Heron, Montreal.	do ..	27	3·59
1890.			WINDSOR, N.S.				
Aug. 18.	9889	Mustard, bulk....	John Lynch & Son, 89 Water Street.	Keen & Robinson, London, Eng.	do ..	15	2·65
do 18.	9890	do fine......	Jess. P. Smith, 4 Gerrish Street.	J. & J. Colman, London, E.	3 tins.	30	3·14
do 18.	9891	....	W. H. Paysant, 3 Stannus Street.	Acme Mills, Montreal....	¾lbs.	36	4·28
do 18.	9892	do superfine	J. E. Graham, 59 Water Street.	S. H. & A. S. Ewing, Montreal.	do ..	30	16·81
do 18.	9893	do do Durham.	Wood & Murphy, 50 Water Street.	Dearborn & Co., St. John, N.B.	do ..	30	8·50
do 18.	9894	Mustard D.S.F....	E. C. Shand, 14 Water Street.	Pure Gold Manufacturing Co., Toronto.	3 tins.	42	5·41
			ANNAPOLIS, N.S.				
do 20.	9895	Mustard, Superior Durham.	W. Malcolm, St. George Street.	do ..	do ..	30	3·32
do 20.	9896	Mustard, Genuine Durham.	W. McCormick & Sons, St. George Street.	Simpson Bros. & Co., Halifax, N.S.	do ..	30	4·33
do 20.	9897	Mustard, bulk....	Pickles & Mills, St. George Street.	Cunningham & Curran, Halifax., N.S.	¾lbs..	20	2·10
do 20.	9898	do	Clarke & Co., Railroad Esplanade.	Brown & Webb, Halifax....	do ..	30	2·88

of 95 samples of Commercial Mustard—*Continued.*

RESULTS OF ANALYSIS—PER CENT.									Name of Analyst.	Remarks.
Ash.			Moisture and Loss at 100°C.	Extracts.		Sulphur.	Nitrogen.	Probable amount of Pure Mustard.		
Soluble in Water.	Insoluble in Water.	Insoluble in Hydrochloric Acid.		By Petroleum Ether—Fixed Oil	By Alcohol, 84 p. c.					
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
0·12	2·82	...	8·05	20·65	...	0·03	...	60	Maynard Bowman.	Mixed starches, cayenne, urmeric; adulterated.
0·30	3·10	...	10·29	7·57	...	...	...	25	do	Wheat starch, cayenne, turmeric; adulterated.
0·07	3·21	...	7·77	25·97	...	...	...	75	do	Mixed starch, cayenne; unadulterated.
0·70	2·69	...	6·46	30·72	...	0·01	...	90	do	Wheat starch; unadulterated.
0·09	2·93	...	8·22	20·69	...	0·03	...	60	do	Mixed starches, cayenne, turmeric; adulterated.
...	...	...	8·21	...	...	0·02	...	50	do	Mixed starches, turmeric; adulterated.
0·46	3·70	...	9·65	7·09	...	0·15	...	25	do	Maize and rice starch, turmeric; adulterated.
0·30	3·15	...	10·25	7·07	...	...	...	25	do	Wheat starch, cayenne, turmeric; adulterated.
0·23	6·17	...	7·80	19·45	...	0·04	...	...	do	No starch, turmeric, probably exhausted cake; adulterated.
0·17	2·72	...	9·83	20·35	...	0·01	...	60	do	Mixed starch, turmeric, cayenne; adulterated.
0·13	2·70	...	9·91	20·09	...	0·03	...	60	do	do do
0·68	3·14	...	6·21	30·65	...	tr'ce	...	90	do	Wheat starch; unadulterated.
0·05	3·54	...	11·11	7·42	...	0·02	...	25	do	Potato starch, turmeric; adulterated.
0·19	2·46	...	9·63	20·91	...	0·03	...	60	do	Mixed starch, turmeric, cayenne; adulterated.
0·12	3·02	...	6·15	30·48	...	tr'ce	...	90	do	Mixed starch, cayenne; unadulterated.
0·04	4·24	...	8·79	8·01	...	0·03	...	25	do	Wheat starch, cayenne, turmeric; adulterated.
...	...	0·75	7·22	7·55	...	3·08	...	...	do	Wheat flour, turmeric, cayenne; nearly 14 p.c. cal. sul; adult'r'ed
...	...	2·20	6·34	14·08	...	0·37	...	...	do	Wheat flour, tumeric, cayenne; nearly 1·56 p.c. cal. sul.; adult'ed
0·93	4·48	...	8·08	17·27	...	0·02	...	50	do	Mixed starches, turmeric; adulterated.
0·28	3·04	...	9·71	7·65	...	0·01	...	25	do	Mixed starches, cayenne; adulterated.
0·17	4·16	...	8·99	11·00	...	0·02	...	35	do	Wheat flour, turmeric; adulterated.
0·37	1·73	...	12·43	4·60	...	0·04	...	15	do	Maize starch, turmeric, cayenne; adulterated.
0·14	2·74	...	9·28	20·56	...	0·03	...	60	do	Mixed starch, turmeric, cayenne; adulterated.

In the foregoing table the results are given of examining 95 samples. In judging of their purity the public analysts have heretofore been guided by the suggestions regarding analysis contained in the circular G. 120, issued by the Department, in which it is stated that "for medicinal purposes mustard should be pure, equal to 35 "per cent. of fixed oil. For dietetic purposes, at least 22 per cent. fixed oil required, "indicating 30 per cent. admixture of inert farinaceous matter, beyond which sample "should be condemned." This quotation no doubt expresses the views of my predecessor in office, the late Mr. H. Sugden Evans, which have evidently been made use of by Dr. W. H. Ellis, of Toronto, (by whom 42 of the above analyses were made,) and also by Mr. Bowman of Halifax. If the standard here given is adhered to, it is evident that not one genuine sample of mustard is to be found in the above list. It is no doubt the case that this standard of 35 per cent. fixed oil for pure mustard can easily be justified by a reference to authorities on the subject. It appears, however, from work done by Mr. F. W Babington in this laboratory, and yet to be mentioned, that in some mustard farina prepared from seed he found only 30·5 per cent. of fixed oil. The results of such analyses depend, of course, greatly upon the quality of the seed, on the fineness of the sieve used in separating the flour from the husk, and on the method employed of determining the fixed oil. Until further experience has been gained it would seem wise and reasonable to assume 30 per cent. fixed oil as the *lowest* limit for pure mustard. Yet, even on this assumption only seven of the samples described in the above list can be regarded as pure, viz.: Nos. 6715, 6716, 8753, 9541, 9,877, 9,886 and 9,890.

If, as expressed in the above quotation, an admixture of 30 per cent. inert farinaceous matter be allowed in mustard "compounds," it follows that they should not contain less than 23 per cent. of fixed oil. It is upon this basis that Mr. Babington has calculated the amount of pure mustard in the various samples analysed by him, after making an allowance for the fat contained in the diluent when known. If, however, we adhere to 22 per cent. as the lowest limit for the fixed oil in a "compound" mustard it follows that only 9 of the 95 samples analysed can be regarded as coming within the description of mustard compounded for dietetic purposes. The classification of the mustards above described therefore stands thus:—

	Number of samples.	Percentage of qualities.
"Pure"	7	7·37
"Compound"	9	9·47
Adulterated	79	83·16
	95	

For purposes of comparison some analyses were made of mustards and mixtures the particulars of which are given in the following table (II). In this work, as well as in that recorded in Table I, Mr. Babington was assisted by Mr. A. L. Tourchot and Mr. A. C. Macfarlane.

II.—RESULTS of Analysis of known Mixtures of Mustard with other Substances.

Date of Analysis.	Description of Mustard or Mixture.	Results of Analysis.									Name of Analyst.
		Ash.				Moisture and Loss at 100° C.	Extracts.		Sulphur.	Nitrogen.	
		Total.	Soluble in Water.	Insoluble in Water.	Insoluble in Hydrochloric Acid.		By Petroleum Ether. Fixed Oil.	By Alcohol of 84 p.c.			
1890.		p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
July 30..	Mustard seed (white)..	4·98	·56	4·42	·18	6·58	27·01	15·64	1·09	4·07	F. W. Babington.
Aug. 10 .	Mustard husks do	4·42	·65	3·77	·05	8·20	23·56	13·74	·88	4·42	do
do 10..	Mustard farina..	4·27	1·02	3·25	·10	6·90	30·50	18·46	1·14	5·16	do
July 30..	Mustard cake.	7·35	·83	6·52	1·30	7·98	14·30	15·58	1·03	5·00	do
Aug. 4..	90 p.c. wheat flour, 10 p.c. turmeric, called Mixture A....	1·50	1·08	·42	·17	5·14	2·46	2·02	·08	1·88	do
do 4..	No. 1 Mixture, 80 p.c. mustard farina, 20 p.c. Mixture A..	3·60	·85	2·75	·07	7·18	24·05	15·40	1·12	4·51	do
do 4..	No. 2 do 60 p.c. mustard farina, 40 p.c. Mixture A..	3·05	·50	2·55	·15	8·60	17.45	11·15	·80	3·85	do
do 4..	No. 3 do 40 p.c. mustard farina, 60 p.c. Mixture A..	2·47	·60	1·87	·17	9·30	10·84	8·07	·55	3·21	do
do 10..	90 p.c. terra alba, 10 p.c. turmeric, called Mixture B......	72·45	11·13	61·32	49·80	15·09	None.	None.	....	·15	do
do 10..	No. 4 Mixture, 50 p.c. mustard farina, 50 p.c. Mixture B..	38·17	5·40	32·77	24·77	11·44	15·5	9·86	.....	2·60	do
do 10..	No. 5 do 20 p.c. mixture B, 80 p.c. mustard farina..	17·97	3·60	14·37	5·07	8·85	23·6	15·24	....	4·16	do

Among other interesting results shown by these figures, it would appear that the estimation of the alcoholic extract may become useful for indicating the presence in "compound" mustards of mustard cake, from which, of course, more or less of the fixed oil has been expressed.

With regard to the adulterants which are mentioned in Table I, it may be remarked that it is held by the manufacturers that it saves trouble in grinding mustard seed to add a small percentage of flour, and that this is also requisite to insure the keeping qualities of the product. Even if this be admitted, it appears, from the analyses of the seven pure samples above given (Keen's and Coleman's best), that not more than 6 per cent. is necessary for these purposes. The admixture of larger quantities, even in those qualities which are fairly called "compound," brings with it the necessity of using turmeric to restore the yellow colour. This substance is said to be harmless, but the introduction of any dyestuff into food should be discouraged. In the large class of adulterated mustards above indicated, in which the amount of diluting material ranges from 30 to 80 per cent., it appears that frequently some substance has to be added to restore pungency. This accounts for the presence of cayenne pepper in a considerable number of the samples. The most inexcusable adulterant is, however, terra alba, or sulphate of lime, and no doubt its use is occasioned by the insatiable demand of the retailer for "cheap goods." When it is considered that 83 per cent. of the samples collected contain over 30 per cent. of adulteration it cannot be denied that a remedy is urgently called for, which would probably be as welcome to the manufacturer and dealer as to the general public.

It will, of course, at once be remarked that the proper remedy is the prosecution of the offenders under the Adulteration Act, but that Act practically permits the admixture of substances not injurious to health, provided the mustard sold is labelled as a compound, which, as will be seen from the description given in Table I, is very generally done. The true remedy lies in section 19 of the Act, which empowers the Governor in Council "from time to time to establish a standard of "quality for and fix the limits of variability permissible in any article of food, or "drug, or compound," the standard for which is not otherwise established. In the case of mustard, I would recommend that the limits above indicated be fixed by Order in Council, *i.e.*, that pure mustards should not contain less than 30 per cent. of fixed oil, and "compounds" or "mixtures" not less than 22 per cent. As has been above explained, the latter percentage corresponds to a diluent addition of 30 per cent. This cannot be regarded as too severe a regulation, since the New Jersey State Board of Health only allows 25 per cent., and a similar limit has, by judicial decision, become established in England. If this understanding were effected it would become the interest of the manufacturers to adhere to it, and prosecutions under the Act for the grosser forms of adulteration would become effective. Until such an arrangement is arrived at, I have respectfully to recommend that the publication of such reports as the present one be continued.

I have the honour to be, Sir,
Your obedient servant.
THOMAS MACFARLANE,
Chief Analyst.

OTTAWA, 11th December, 1890.

BULLETIN No. 20—PEPPER.

E. MIALL, Esq.,
Commissioner of Inland Revenue.

SIR,—Herewith I enclose and recommend for publication a report by Mr. A. McGill, B.A., &c., Assistant Analyst, on the examination of a large number of ground peppers. From the results given in this report it is plain that at least two-thirds of the peppers sold in Canadian towns are adulterated, some of them very grossly. In the great majority of cases these peppers were sold in bulk, and not labelled as "compound," Legal proceedings could no doubt, therefore, be instituted against the vendors in question, but doing this would unduly tax the means at the disposal of this Branch, owing to the great number of the delinquents. In the meantime, and for the present cases it is considered probable that some good may be accomplished by publishing the names of the vendors and alleged manufacturers of the adulterated goods.

With regard to fixing a limit for the inorganic substances contained in peppers, I expressed the opinion, three years ago, that the latter should not contain more than 8 per cent. of ash, an amount which practically agrees with Mr. McGill's proposed maximum of 7 per cent. With reference to the quantity of harmless diluent which should be allowed in the case of peppers sold and properly labelled as compound, I am not prepared at present to lay before you any recommendation.

I have the honour to be, Sir,
Your obedient servant,
THOMAS MACFARLANE,
Chief Analyst.

30th December, 1890.

LABORATORY OF THE INLAND REVENUE DEPT.,
OTTAWA, 27th December, 1890.

T. MACFARLANE, Esq., F.R.S.C., &c.,
Chief Analyst, Inland Revenue Dept.

SIR,—I beg to hand you herewith a report upon the analysis of seventy-three (73) samples of commercial pepper, the sources of which, and the results obtained in their examination are given in the following table :—

TABLE I.—Results of the Examination of 73

Date of Collection.	Number of Sample.	Description of Pepper by Vendor.	Name and Address of Vendor.	Name and Address of Manufacturer as given by Vendor.	Quantity.	Cost.	Moisture, etc., lost at 100° C.	Portion Soluble in hot Water.
1889.			GUELPH, ONT.			Cts.	p. c.	p. c.
Nov. 19..	9501	Black (sold as compound).	Henry Loch..............	Snow Drift Company, Brantford, O.	1 lb.	30	10·15	1·39
do 19..	9502	White, pure....	Watson Bros	do ..	do	60	11·30	0·64
			GALT, ONT.					
do 19..	9503	Black, pure.....	W. P. Clay...............	W. H. Gillard, Hamilton.	do	30	10·75	2·00
do 19..	9504	White, pure ...	do	do ..	do	45	11·40	0·38
			BARRIE.					
do 21..	9506	Black, pure.....	J. M. Bothwell............	Jardine & Company, Toronto.	do	40	11·25	1·99
do 21..	9507	White, compou'd	do	do ..	do	40	11·20	0·30
			TORONTO.					
do 22..	9513	do ..	R. Holywell, 164 King St. W.	Ellis & Keighley, Toronto.	do	25	11·00	0·26
do 22..	9514	Black.........	do ..	do ..	do	40	8·60	2·34
do 22..	9516	White, mixture.	David Killon, 155 King St. W	Todhunter, Mitchell & Co., Toronto.	do	40	10·75	0·33
do 22..	9517	Black, compound	do ..	J. Watson, Toronto.	do	25	8·30	6·36
			RICHMOND, P.Q.					
Nov. 26..	8973	White..........	Wm. Davis, Main Street..	Not known..........	1 lb.	45	11·0	0·57
do 26..	8974	Black	do ..	Pure Gold Manufacturing Co., Toronto	do	35	10·20	0·94
			SHERBROOKE.					
do 26..	8975	Black, pure.....	Heney & Ferguson, 137 Wellington Street.	Not known..........	do	30	11·30	1·19
do 26..	8976	White, pure....	do ..	do	do	40	10·40	0·25
			LÉVIS, P.Q.					
do 27..	8979	White, pure ...	S. Couture, 65 Côte de Passage.	Vendor.............	do	40	12·15	0·35
do 27..	8980	Black, pure.....	do ..	do	do	24	10·40	1·1

samples of Black and White Pepper.

RESULTS OF ANALYSIS.

Ash.				Alcoholic Extractive, Essentially Piperin and Resin.	Results of Microscopic Examination.	Remarks.
Portion Insoluble in Water.	Total.	Portion Insoluble in Hydrochloric Acid.	Sand expressed as a percentage of the total Ash.			
p. c.	p. c.	p. c.	p. c.	p. c.		
6·08	7·47	3·38	45	......	At the time of analysis of these samples other work demanded attention and it was found impossible to make a microscopical examination. An opinion can therefore be given only in certain cases, and even then with reserve.	
2·92	3·56	0·77	22	......		Apparently genuine.
3·91	5·91	1·60	27	......		do
1·78	2·16	0·37	17	....		do
2·25	4·24	0·56	13	.....		do
1·84	2·14	0·38	18	.. ...		
1·30	1·56	0·23	15	.....		
10·68	13·02	5·24	40	......		If genuine of very low quality.
1·23	1·56	0·28	18	....		
4·90	11·26	2·16	19	....		Contains sulphate of lime. Adulterated.
2·71	3·28	0·53	16	......	Other work prevented microscopic examination of these samples being made.	Apparently genuine.
10·42	11·36	7·69	68	......	do do ..	If genuine, then of low quality.
5·07	6·26	2·91	46	......	do do ..	Apparently genuine, but too high proportion of sand in ash.
2·23	2·48	0·72	29	......	do do ..	
0·83	1·18	0·27	23	......	do do ..	
10·92	12·07	8·11	67	......	The portion of ash insoluble in acid resembles particles of burnt ferruginous clay or sand, like brick dust.	Adulterated.

TABLE I.—Results of the Examination of 73

Date of Collection.	Number of Sample.	Description of Pepper by Vendor.	NAME AND ADDRESS OF		Quantity.	Cost.	Moisture, etc., lost at 100° C.	Portion Soluble in hot water.
			Vendor.	Manufacturer, as given by vendor.				
1890.			QUEBEC.				p. c.	p. c.
Nov. 28..	8984	White, pure ...	Joseph Derg, 28 St. George Street.	Not known..........	1 lb.	35	11·0	0·49
do 28..	8985	do	Timothy Coveny, 2 Patrick Street.	do	do	35	8·40	1·14
do 28..	8986	Black, pure.....	do ..	do	do	20	11·25	0·98
do 28..	8987	do	A. Blondeau, 240 St. Valier Street.	Vendor............	do	28	11·30	1·84
			MONTREAL.					
July 8..	9147	Black, pure.....	G. W. Wright, 675 Dorchester Street.	C. A. Liffiton & Co., Montreal.	do	30	8·59	0·80
do 8..	9148	White, do ..	do ..	do ..	do	40	10·72	0·56
do 8..	9149	do do	E. C. Legault, 674 Dorchester Street.	S. Marrotte, Montreal.	do	40	11·29	0·49
do 8..	9150	Black, do	do ..	do ..	do	25	10·20	1·37
do 9..	9151	White, compound.	G. Gabinville, 423 Dorchester Street.	D. C. Brosseau & Co., Montreal.	do	40	10·92	0·66
do 9..	9152	Black, compound	do ..	do ..	do	30	9·74	1·12
do 9..	9153	White, pure....	J. Archambault, 19 Vitre Street.	E. H. & A. S. Ewing, Montreal.	do	35	10·88	0·42
do 21..	9154	Black, do	E. Cunningham, 653 Lagauchetière Street.	Lyman Sons, Montreal.	do	35	9·63	1·62
do 21..	9155	White, do	do ..	do ..	do	45	12·55	0·46
do 21..	9156	do do	Laflèche & Murphy, 33 St. Dominique Street.	G. G. Duffy & Co., Montreal.	do	40	11·77	0·78
do 21..	9157	Black do	do ..	do ..	do	28	11·32	1·68
do 21..	9158	White, pure	H. A. Riopelle, 35 St. Dominique Street.	Thompson, Bradshaw & Co., Toronto.	1 lb.	40	11·92	0·50
do 21..	9159	Black do	do ..	do ..	do	25	7·76	4·66
do 21..	9160	White, compound.	Paul Major, 54 Bonsecours Street.	Bourgeau & Heron, Montreal.	do	40	10·44	0·27
do 21..	9161	Black, compound	do ..	do ..	do	20	9·93	1· 2

Samples of Black and White Pepper—*Continued.*

Results of Analysis.						Remarks.
Ash.						
Portion Insoluble in hot water.	Total.	Portion Insoluble in Hydrochloric Acid.	Sand expressed as a percentage of the Total Ash.	Alcoholic Extraction essentially Piperin and Resin.	Results of Microscopic Examinations.	
p. c.	p. c.	p. c.	p. c.	p. c.		
2·42	2·91	0·28	10	.....	Other work prevented microscopic examination of these samples being made.	
6·13	7·27	3·35	46	.....	do do ..	The portions of ash insoluble in water and acid are much too high for genuine white pepper.
3·10	4·08	0·52	13	......	do do ..	Apparently genuine.
6·31	8·15	3·99	49	......	do do ..	If genuine, then of low quality.
23·08	23·88	18·00	78	4·86	Essentially pepper dust (P.D.) with a little cayenne.	Impure piperin, 1·62 p.c. The portion insoluble in acid contained silica and alumina, and is essentially clay and sand colored by iron oxide. Adulterated.
2·41	2·97	0·68	21	6·11	Contains a large amount of rice flour.	Separated 0·79 p.c. piperin. Adulterated.
2·72	3·21	0·31	10	6·82	Rice flour; very little genuine pepper tissue. A yellow substance not identified.	Separated 0·22 p.c. piperin. Adulterated.
1·90	3·27	0·38	12	7·60	Maize and rice flour with leguminous starches; pepper dust; and a yellow substance not identified.	Separated 1·64 p.c piperin. Adulterated.
2·04	2·70	0·62	23	5·70	Much maize and some rice flour; yellow tissues unidentified.	Separated 0·52 p.c. piperin. Adulterated.
2·60	3·72	0·32	9	8·70	Rice flour and cocoanut shell; very little genuine pepper tissue.	Separated 0·16 p.c. piperin. Adulterated.
1·76	2·18	0·06	3	5·35	Rice maize and leguminous starches; very little genuine pepper.	Adulterated.
11·76	13·38	7·64	57	9·86	No other than pepper tissues found; but an apparent excess of pepper dust.	Genuine, but of very low quality.
2·68	3·14	0·24	8	9·73	Pepper tissues only..	Genuine.
2·74	3·52	0·68	19	7·80	do	do
9·06	10·74	5·70	53	10·41	A small quantity of wheat flour; an apparent excess of pepper dust.	Flour perhaps in insufficient quantity to constitute adulteration. Pepper of very low quality.
1·84	2·34	0·52	22	4·52	Almost entirely rice flour, with a little maize; very little pepper; contained small living worms.	Adulterated.
10·32	14·98	0·84	6	5·42	Mixture of rice flour and cocoanut shell, with a little wheat; little genuine pepper tissues found; with apparent excess of pepper dust.	do
2·24	2·51	0·44	18	6·52	Rice and maize flour, with a little pepper; a foreign substance not identified.	do
4·26	5·48	1·70	31	8·16	Rice and other foreign starches; very little genuine pepper tissues; a red substance unidentified; also a black substance.	do

TABLE I—Results of the Examination of 73

Date of Collection.	Number of Samples.	Description of Pepper by Vendor.	Name and Address of		Quantity.	Cost.	Moisture, &c., lost at 100°C.	Portion Soluble in hot water.
			Vendor.	Manufacturer as given by Vendor.				
1890.			QUEBEC.			Cts.	p. c.	p. c.
July 24..	9162	Black, compound	M. Boyce & Son, St. George Street.	G. G. Duffy & Co., Montreal.	1 lb.	20	8·94	0·92
do 24..	9163	White do ..	do ..	Loranger & Loranger, Detroit, Mich.	do	30	11·54	0·26
do 24.	9164	do do ..	P. F. Ouellet, 24 St. George Street.	Supplied by Nazaire Turcot, Dalhousie Street, Quebec.	do	30	11·59	0·38
do 24..	9165	Black do ..	do ..	do ..	do	20	9·13	0·46
do 24..	9166	White, pure	O. Vocelle, 28 Grant Street.	Vendor	do	36	11·43	0·76
do 24..	9167	Black do	do ..	do	do	20	9·39	2·04
do 24..	9168	White, compound.	O. Lefebvre, 83 Grant Street	Thompson & Bradshaw, Toronto.	do	30	11·36	0·76
do 24..	9169	Black, compound	O. Lefebvre, 83 Grant Street	Thompson & Bradshaw, Toronto.	1 lb.	26	7·59	4·12
do 24..	9170	Black, pure....	N. Leberge, 108 Bridge Street.	Supplied by N. Rioux, St. Paul Street.	do	24	10·67	1·94
do 24..	9171	do	John Lemelin, 111 Bridge Street.	Vendor.	do	20	8·08	1·48
do 24..	9172	White, pure ...	do ..	Supplied by Whitehead & Turner.	do	30	11·67	0·56
do 24..	9173	Black, pure.....	E. Anger, Champlain Market Place.	Vendor	do	20	9·71	1·06
do 24..	9174	Black, compound	do ..	Bourgeau & Heron, Montreal.	do	15	8·47	0·98
do 24..	9175	do ..	Alex. Grant, 72 Clamplain Street.	G. G. Duffy & Co., Montreal.	do	20	9·95	1·58
do 24..	9176	Black, pure.....	E. Bedard & Co., 42 St. Nicholas Street.	Not known..........	do	20	10·16	2·20
			MONTREAL.					
do 28..	9177	Black, pure.....	Duscheneau & Barbeau, 1857, St. Catherine Street.	Bourgeau & Heron, Montreal.	do	25	9·90	1·98
do 28..	9178	White, pure	do ..	do ..	do	40	10·52	0·50
do 28..	9179	do compound	T. H. Lesage, 1308 Mignonne Street.	G. G. Duffy & Co., Montreal.	do	40	10·94	0·30
do 28..	9180	Black, compound	T. H. Lasage, 1,308 Mignonne Street.	G. G. Duffy & Co., Montreal.	do	20	9·51	1·76
do 28..	9181	do ..	P. Desormiers, 602 Dorchester Street.	S. Marrotte, Montreal.	do	20	9·89	2·32
do 28..	9182	White, compound.	do ..	do ..	do	30	10·87	1·30
do 28..	9183	do ..	P. G. Rowan....	National Spice Mills, Montreal.	do	30	11·12	0·66
do 29..	9184	do ..	R. Walsh	S. H. & A. S. Ewing, Montreal.	do	40	11·56	0·46

samples of Black and White Pepper.—*Continued.*

Results of Analysis.						Remarks.
Ash.						
Portion Insoluble in Water.	Total.	Portion Insoluble in Hydrochloric Acid.	Sand expressed as a percentage of the total Ash.	Alcoholic extraction essentially Piperin and Resin.	Results of Microscopical Examination.	
p. c.	p. c.	p. c.	p. c.	p. c.		
19·48	20·40	9·52	47	7·19	Rice and wheat flour; also pepper dust and mineral matter like brick dust.	Adulterated.
2·06	2·32	0·16	7	5·15	Composed chiefly of rice flour; some wheat and maize starches also found; very coarsely ground.	do
1·04	1·42	0·08	5	4·65	Almost entirely rice flour, with a little wheat; very little pepper tissue.	do
4·92	5·38	1·52	28	7·96	Rice and roasted cocoa-nut shell; very little pepper.	do
2·88	3·64	0·40	11	5·24	Chiefly rice flour. The ground pepper contained in this sample is very coarsely ground.	do
15·08	17·12	14·64	85	7·16	A mixture of pepper with a great excess of pepper dust.	Apparently genuine, but of very poor quality.
1·30	2·06	0·20	10	4·42	Chiefly rice flour; red epidermic cells, belonging to some unidentified foreign tissue.	Adulterated.
8·46	12·38	0 18	2	5·45	Rice flour and cocoanut shells; very little pepper.	Adulterated.
6·40	8·34	3·48	42	8·76	Pepper and excess of pepper dust..........	Genuine, but of low grade.
20·94	22·42	15·74	70	4·64	Pepper with a great excess of pepper dust; much earthy matter. The genuine pepper not well ground.	Earthy matter in great excess; adulterated (?).
1·28	1·84	0·18	10	4·08	Chiefly rice flour, with some other foreign starches; also some tissues not identified.	Adulterated.
14·14	15·20	10·48	69	9·16	Pepper and much pepper dust.	Pepper, with great excess of mineral matter; adulterated (?).
12·68	13·66	3·58	26	7·78	Rice and wheat flour and other foreign matter not identified.	Adulterated.
4·32	5·90	1·58	27	10·26	Chiefly pepper, with some rice and wheat flour and pepper dust.	do
6·74	8·94	4·06	45	9·83	Pepper and pepper dust....................	Genuine, but of low quality.
7·64	9·62	4·50	47	10·55	Chiefly pepper, with a little rice and wheat flour and pepper dust.	Adulterated.
0·78	1·28	0·16	13	5·68	Much maize flour.....	do
2·86	3·16	0·44	14	5·88	Chiefly rice, with a little wheat, and some pepper.	do
11·50	13·26	1·32	10	8·59	Wheat and rice flour, with roasted cocoanut shell; very little pepper; mustard cake.	do
2·42	4·74	1·52	32	10 86	Rice and cocoanut shell; very little pepper if any; small living worms contained in it.	do
2·68	3·98	0·28	7	9·13	Chiefly rice, with a little wheat; foreign tissues unidentified.	do
1·72	2·38	0·46	20	4·33	Chiefly rice flour; very little pepper; a substance of reddish colour undetermined.	do
1·90	2·36	0·04	2	4·71	Rice and a little wheat; a red component undetermined.	do

TABLE I.—Results of the Examination of 73

Date of Collection.	No. of Sample.	Description of Pepper by Vendor.	Name and Address of		Quantity.	Cost.		
			Vendor.	Manufacturer as given by Vendor.			Moisture, &c., lost at 100° C.	Portion Soluble in hot water.
1890.			MONTREAL.			Cts.	p. c.	p. c.
July 29..	9185	Black, compound	R. Walsh..................	S. H. & A. S. Ewing, Montreal.	1 lb.	20	10·84	1·66
do 29..	9186	Black, pure.	W. Hunter, 798 Dorchester Street.	Lockerby Bros., (furnishers).	do	40	9·72	1·58
do 29..	9187	White, pure.	do ..	do ..	do	40	11·44	0.46
do 29..	9188	do ..	Arthur Bourdon, 127 St. Lawrence Street	S. H. & A. S. Ewing, Montreal.	do	40	12·20	0.66
do 29..	9189	Black, pure, guaranteed.	M. Hodge, 181 St. Lawrence Street.	Ransom, Forbes & Co. (furnishers).	do	25	11·04	2·86
do 29..	9190	Black, compound	F. Aubin, 2 St. Lawrence Market Place.	D. C. Brosseau & Co.	do	20	10·20	1·52
do 29..	9191	Black, compound	Brouillet & Co., 115 St. Dominique Street.	S. Marrotte, Montreal	do	25	10·60	1·14
			SHERBROOKE, P.Q.					
do 31..	9192	Black, pure.....	W. H. Fuller, 18 Commercial Street.	S. H. & A. S. Ewing, Montreal.	do	30	11·24	2·66
do 31..	9193	White do	do	do	do	40	12·24	0·32
do 31..	9194	do do	McDonald Bros., 8 Wellington Square.	G. A. Matthewson, Montreal.	do	40	11·72	0·50
do 31..	9195	Black do	do	do	do	25	10·36	1·80
do 31..	9196	White, comp'd..	J. A. Dubuc, 108 Wellington Street.	Thompson, Bradshaw & Co., Toronto.	do	40	11·80	0·50
do 31..	9197	Black do ..	do	do	do	25	9·00	1·39
do 31..	9198	do do ..	Parker & Bourque, 180 Wellington Street.	Bourgeau & Heron, Montreal.	do	20	9·88	0·86
do 31..	9199	do do ..	L. Proulx & Co., 157 Wellington Street.	Lees, Wilson & Co., Montreal.	do	30	11·56	2·74

Samples of Black and White Pepper—*Concluded.*

Results of Analysis.						Remarks.
Ash.						
Portion Insoluble in Water.	Total.	Portion Insoluble in Hydrochloric Acid.	Sand expressed as a percentage on the total Ash.	Alcoholic Extraction essentially Piperin and Resin.	Results of Microscopic Examinations.	
p. c.	p. c.	p. c.	p. c.	p. c.		
1·86	3·52	0·42	12	7·76	Rice, maize and wheat starches; some pepper dust and an undetermined substance like that in 9160.	Adulterated.
12·80	14·38	9·14	63	7 93	Pepper, with pepper dust.	Genuine, but of very poor quality.
4·38	4·84	1·68	34	8·53	Pepper tissues only.	Genuine.
2·92	3·58	0·24	7	7·49	Pepper tissues only.	do
10·84	13·70	7·22	53	10·98	Pepper, with a great deal of pepper dust.	Gunuine, but of very poor quality.
1·48	6·00	1·76	29	9·25	Composed in great part of rice flour; a black substance (charcoal?) and a yellow substance undetermined; also a red substance resembling pimento tissues; very little pepper.	Adulterated.
3·24	4·38	0·68	15	10·23	Rice flour, wheat flour, cocoanut shell; a yellow substance undetermined; very little pepper tissue.	Adulterated.
3·28	5·94	1·00	17	11·70	Pepper tissues and pepper dust............	Genuine.
2·28	2·60	0·01	1	7·77	Pepper tissues only......	do
3·36	3·86	0·32	9	7·94	do	do
4·80	6·60	0·44	7	8·38	Rice flour, pepper dust; a little cocoanut shell, roasted, and mustard cake.	Adulterated.
2·10	2·60	0·14	5	5·11	Rice flour..............................	do
4·06	5·44	1·36	25	10·53	Rice flour, roasted cocoanut shell, mustard cake, cayenne and linseed cake (?) or something resembling it.	do
11·40	12·26	1·70	14	9·20	Much maize, a little rice and wheat, cayenne and some cocoanut shell (?) with pepper tissues.	do
3·20	5·94	1·02	17	11·34	Pepper tissues, with pepper husk in excess, and some cocoanut shell. (?)	Doubtful.

Before any making remarks upon the contents of the foregoing table, it may be well to give the following explanations:—

Pepper is the fruit of *Piper nigrum*, a perennial climbing shrub which is cultivated chiefly in the East Indies. The fruit is a small drupe, *i.e.*, a stone-fruit like the cherry, with a fleshy outer portion (pericarp). This berry-like fruit grows in closely packed clusters, each consisting of from 20 to 30 drupes, upon a common stalk. Portions of this stalk (peduncle) may be found in every sample of black pepper-corns, and on examination will be found to shew concave depressions where the berries were attached. "The plant is capable of growing to a height of 20 or 30 feet, but for the sake of convenience is usually kept low, and is often trained on poles." *Flückiger and Hanbury.*—This peculiarity in the culture of the pepper plant is of very considerable importance, since the trailing habit of the vine brings the pendulous clusters in close proximity to the earth, and explains the fact that a good deal of sand and clay are invariably found attached to the soft pericarp. This mineral matter is dried into the skin of the berry during its later treatment.

BLACK PEPPER.—For the production of black pepper the fruit is plucked before it is quite ripe, and "dried in the sun, or in bamboo baskets near a gentle fire." The outer soft portion of the drupe shrivels, turns black in colour, and ultimately becomes quite hard and brittle, and so firmly adherent to the stony inner portion as to be practically incapable of being separated from it.

WHITE PEPPER.—When white pepper is wanted, the berries are allowed to ripen before picking. They are then soaked in water for a time to soften the outer portion (pericarp), which is then removed by friction. After this treatment the berries are dried in the sun. It will appear, therefore, that the varying amount of sand and clay which necessarily adheres to black pepper berries should be entirely absent from those of white pepper.

The *Ground Pepper* of the shops should be nothing else than the berries above described passed through a suitable mill.

The analysis of 73 samples of commercial ground pepper, of which details are given in Table I, furnished the following data:—

Genuine pepper,	20	samples	27	per cent.
Adulterated pepper	38	do	52	do
Doubtful do	15	do	21	do
	73	do	100	

The chief reason why so many samples are classed as doubtful is that no maximum limit is fixed to the amount of mineral matter which may properly be allowed as an unavoidable impurity in pepper. Owing to the trailing habit of the plant, as pointed out already, a certain amount of sand, clay, and other components of the soil, attaches itself to the soft exterior of the berry and dries fast to it, so as to be difficult of removal except by a process which would rub away a large portion of the fruit itself. It is of first importance to determine the limits within which this adhering matter may be considered as a necessary and unavoidable impurity, since there is a strong temptation to add such foreign matter fradulently. Of course white pepper, which has, as explained, undergone a decorticating and cleansing process before export, should be practically free from adherent earthly matter.

By burning a known weight of pepper, under proper conditions, the whole of the organic matter (ash) represents the amount of mineral matter which properly belongs to the structure of pepper, plus the adventitious mineral matter which has attached itself to the berry during growth, or has been fradulently added to the ground pepper. The *total ash*, less the amount properly belonging to pepper tissue, is, therefore, a measure of the foreign mineral matter present in a given sample. On treating this ash with hydrochloric acid practically the whole of it is dissolved, excepting that part which consists of sand. It is evident that the undissolved portion will be greater or less as the pepper comes from a sandy soil or otherwise, so that this estimation cannot be expected to be so uniform in its indications for genuine berries; although it should be easy to fix a limit which should never be exceeded by the sand: *i. e.* residue insoluble in hydrochloric acid. The following maxima have been suggested or adopted by the authorities quoted:—

—	Total Ash.	Sand.	Authorities.
Black Pepper	6·5	2·0	Bavarian Association of Technical Chemists, 1890.
	5·0	1·0	Wm. Johnstone, Ph.D., &c., "The Analyst," March, 1889.
	5·5	....	A. W. Blyth, Dict. of Hygiene, &c.
	6·0	....	Röttger, quoted by C. Richardson.
	5·0	....	Clifford Richardson; Bull. Dept. of Agriculture, Wash, 1887.
White Pepper	3·5	1·0	Bavarian Association of Technical Chemists, 1890.
	3·0	....	Röttger.
	2·0	....	Clifford Richardson, 1887.

In the following table I have collected, as far as the total ash is concerned, the result of analysis of a large number of samples of genuine pepper.

ASH OF BLACK PEPPER.

Number of Samples.	Highest.	Lowest.	Mean.	Authority.
25	5·67	4·17	4·25	Ch. Girard, Chief of the Musical Laboratory of Paris, Second Report, 1885.
8	8·99	4·35	6·39	C. Heisch, F.C.S., in "Analyst," vol. xi, p. 186.
6	4·61	3·67	4·26	A. H. Hassall, "Food, &c.," 1875.
Unknown	......	......	4·57	König, "Nahrungs-und Gunussmittel," 1883.
do	5·30	.....	4·84	A. W. Blyth, "Foods, &c.," ed. 1882.
do Penang I	......	.	4·59	Pharm. Centralblatt, 1883, quoted by Dr. O. Dammer, in "Lexikon der Verfalschungen," p. 712.
do do II	. .	.....	4·15	
do Sumatra	... .	......	4·41	
do Aleppo	......	......	3·27	
Singapore	5·93	4·42	5·18	
Unknown	4·70	3·30	4·00	D. Dammer, id., p. 717.
do	5·30	3·30	4·30	A. W. Blyth, Dict. Hygiene, p. 433.
12	4·65	3·51	3·96	W. Johnstone, Ph. D., &c., "Analyst," xiv.
Unknown	5·10	3·40	....	Röttger, quoted in Wash. Bull., 1887.
4	3·85	3·62	3·68	Lenz, Zeit. Anal. Ch., 1884.
Unknown	7·00	3·00	5·00	Weigmann, Report Anal. Ch., 6, 399.
5	4·70	2·91	3·97	C. Richardson; Bull. Dept. of Agriculture, Wash., 1887.
6	5·16	3·98	4·47	Myself.

ASH OF WHITE PEPPER.

Number of Samples.	Highest.	Lowest.	Mean.	Authority.
Unknown	1·54	0·95		Ch. Girard, Second Report, 1885.
6	3·78	1·28	2·00	C. Heisch, "Analyst," vol. xi.
7	1·73	0·90	1·26	A. Hassall, 1875.
Unknown			1·85	König, "Nahrungsund Genussmittel."
do			1·12	A. W. Blyth, 1882.
do Batavia			0·91	Pharm. Centralbl, 1883.
do Singapore			0·91	
do Penang			1 53	
do	2·90	0·80		Röttger, Ver. du Angew, Chemic.
1			0·99	Lenz., Zeit. Aust. Chemic, 1884.
Unknown	3·00	1·00		Weigmann, Report Anal. Ch. 6, 399.
2	1·41	1·34	1·37	C. Richardson, Wash., 1887.
5	3·74	1·64	3·00	Myself.

With the exception of one sample analysed by Heisch, none of the black peppers give more than 7 per cent of ash. I am of the opinion that any sample of genuine black pepper which yields more than 7 per cent of ash should be considered too dirty to be fit for use. I have met only one instance of a whole black pepper which gave as much as 7 per cent of ash, and this sample was certainly unfit for sale. It was obtained in Ottawa in December, 1889. The following are the results of its analysis:—

One hundred parts by weight contained—

A.—Dirt and dust, separated by a sieve of 400 meshes per square inch	13·0
B.—Broken berries, stems and dirt, separated by a seive of 256 meshes per square inch from the residue on the former	1·5
C.—Small pieces of stems, leaves and earthly matter in lumps picked out by hand	1·1
D.—Peduncles and stems in large pieces picked out by hand	3·8
E.—Fairly clean berries	80·6
	100·0

Further analysis gave the numbers below:—

Portions Examined.	Moisture, &c., lost at 100° C.	Ash.					Remarks.
		Soluble in Water.	Insoluble in Water.	Total.	Insoluble in Acid.	Sand expressed as a percentage on the total Ash.	
A	4·50	0·98	34·56	35·54			It will be seen that the ash obtained from the berries after these had been fairly well cleaned is less than 5 per cent.
B and C	8·88						
D	10·64	2·45	6·21	8·66	1·33	15·	
E	11·45	2·07	2·75	4·82	0·71	15·	
The whole pepper calculated	10·45			9·37			

Had this sample of berries been properly cleaned before placing it upon the market its weight would have been reduced by at least 15 per cent.

The following table (II) gives the results of analysis of six samples of genuine black, and five of genuine white pepper corns, obtained from Ottawa city grocers.

WHOLE BLACK PEPPER.

Description of Sample.	Moisture, &c., lost at 100° C.	Ash.					Alcoholic Extract.
		Soluble in Hot Water.	Insoluble in Water.	Total.	Insoluble in HCl.	Sand expressed as a percentage on the total Ash.	
Berries from C. Stratton, Ottawa, 2nd Dec., 1889....	10·45	......	......	9·37	......	....	......
Same berries, after separating 19·4 per cent of dirt, stalks, &c..	11·45	2·07	2·75	4·82	0·71	15	......
Berries from Kavanagh Bros., Ottawa, 28th Dec., '89.	10·62	2·63	1·71	4·34	0·11	3	8·28
do · do 17th Oct., '90.	12·20	2·54	1·70	4·24	0·12	3	9·00
do Bate & Co., Ottawa, 17th Oct., 1890....	11·60	2·52	1·46	3·98	0·06	2	8·54
do C. Stratton, Ottawa, 17th Oct., 1890....	14·10	2·10	3·06	5·16	1·08	21	9·06
do E. Brown, Ottawa, 17th Oct., 1890	12.20	2·64	1·62	4·26	0·10	2	8·68
Average.....	12·03	2·41	2·05	4·47	0·36	8	8·71

WHOLE WHITE PEPPER.

Description of Sample.	Moisture, &c., lost at 100° C.	Soluble in Hot Water.	Insoluble in Water.	Total.	Insoluble in HCl.	Sand expressed as a percentage on the total Ash.	Alcoholic Extract.
Berries from Kavanagh Bros., Ottawa, 28th Dec., '89.	11·30	0·72	2·93	3·65	0·37	....	7·
do do 17th Oct., '90.	11·80	0·68	2·36	3·04	0·26	9	7·
do Bate & Co., Ottawa, 17th Oct., 1890 . .	13·00	0·14	1·50	1·64	0·70	42	8·92
do C. Stratton, Ottawa, 17th Oct., 1890....	12·90	0·70	3·04	3·74	0·88	24	7·26
do E. Brown, Ottawa, 17th Oct., 1890......	12·70	0·46	2·48	2·94	0·56	19	7·22
Average	12·34	0·54	2·46	3 00	0·55	21	7·73

The following results on cocoa-nut shells may be stated here :—

Total ash, 0·66 per cent.
Soluble, 0·48 "
Insoluble, 0·18 "
Sand, 0·14 "
Moisture (*i. e.*, loss of 100° C.), 7·50 per cent.

Of the eight samples of black pepper which are classed as doubtful, on the result of analysis, the following would be condemned on the ground of too high ash, were the standard of 7 per cent as a maximum adopted :—

No. 8,974 yielding 11·36 per cent ash.
8,987 " 8·15 "
9,157 " 10·74 "
9,171 " 22·42 "
9,173 " 15·20 "
9,501 " 7·47 "
9,514 " 13·02 "

While among these samples which are classed as *genuine*, since they contain no foreign tissue the following would be condemned :—

No. 9,167 yielding 17·12 per cent ash.
9,154 " 13·38 "
9,170 " 8·34 "
9,176 " 8·94 "
9,186 " 14·38 "
9,189 " 13·70 "

Among the white pepper samples one is found, No. 8,985, which yields 7·27 per cent ash; at least twice as high a percentage as any fairly clean white pepper corns should give. It appears, therefore, that, on the assumption of such a standard for pepper ash as I have indicated, the result of analysis of the 73 samples examined would lead to the following classification:—

Genuine pepper,	14	samples	19 per cent.
Adulterated pepper,	52	"	71 "
Doubtful "	7	"	10 "
	73		100

It is, however, possible to add fraudulently to pepper a substance like pepper dust which contains an excessive amount of mineral matter, and to reduce the total ash in the pepper so adulterated by the further addition of some substance containing very little mineral matter, such, for example, as wheat or rice flour. These substances yield less than *one* per cent. of ash, and it will be evident that the addition of 50 per cent. of flour to an adulterated pepper yielding 12 per cent. of ash would reduce the percentage of ash in the resulting mixture to 6·5 per cent. The microscopic examination of the sample serves to detect such an addition; and this examination is therefore required as complementary to the estimation of ash.

Before leaving the subject of mineral matter in pepper it may be well to allude to the common adulterant known as pepper dust, and supplied to the trade as P.D.; H.P.D. (hot pepper dust) and W.P.D. (white pepper dust).

The pepper berries, by mutual friction, lose more or less of the dry pericarp and adherent sand in the course of the handling to which they are subject during shipment. The *débris* so resulting is separated by screening in order to render the berries saleable. There can be little doubt that P.D. was originally nothing else than the screenings obtained in this process; but as the supposed exigencies of trade required more of the material than could be supplied for the adulteration of ground pepper, imitations of the genuine pepper-dust were soon manufactured.

Blyth (Foods, p. 497), writes thus:—

"The first, or P.D. used to be principally composed of faded leaves, but linseed-meal is now preferred; H.P.D. is chiefly the husks of mustard, and W.P.D. is ground rice."

Hassall (Foods and Adulteration, p. 538), says:—

"Pepper dust, H.P.D. or P.D. consists either of the sweepings of the warehouses, or else of an article made up in imitation of ground pepper, and expressly used for the adulteration of that article. It is manufactured from rape or linseed cake, mustard husks and cayenne pepper."

I have found in genuine pepper dust (*i.e.* the *débris* of pepper berries), as high as 35·54 per cent. of ash. What it may amount to in the P.D. of commerce, as this is found in Canada, I have not had the opportunity of determining.

Alcohol Extractive.—Alcohol extracts from ground pepper a varying amount of soluble matter, chiefly piperin and resin, the weight extracted depending upon such considerations as (1) the degree of fineness of the powdered pepper operated on; (2) the temperature at which the extraction is performed; (3) the length of time given to the extraction; (4) the form of apparatus employed.

König (Die menschlichen Nahrungs)—und Genussmittel, page 363) points out that while pepper suffers a loss of weight of over 22 per cent. by this process, the weight of the material extracted when determined after drying at 100° C., is only about 12 per cent. of the weight of the pepper used, indicating a loss of about 10 per cent. of volatile matter. He gives the following figures:—

Alcoholic extract of black pepper, dried at 100° C. before extraction.

Calculated from weight lost	22·27	per cent.
" " dry residue	11·67	"
Volatile matter in extract	10·60	

I have obtained the following duplicate numbers for a sample of genuine black pepper:—

	A.	B.
Extraction from loss of weight	24·01	22·48
" weight of residue obtained at 100° C.	12·80	12·30
Volatile extractive	11·21	10·18

Another sample of genuine black pepper gave

By loss	20·50	per cent.
By weight	8·28	"
Difference	12·22	

But in this case different forms of apparatus were used in the processes.

The large quantity of volatile matter extracted by alcohol from pepper, and apparently pretty constant in amount under similar conditions, is unfortunately not distinctly characteristic for pepper. König finds 15·76 per cent. for Cayenne; 9·12 per cent. for long pepper; 11·66 per cent. for pimento.

The process is a somewhat tedious one, and since the interpretation of its indication is uncertain in the present state of our knowledge, I have not carried it out with all the samples examined. The number given in the column headed *Alcoholic Extract* is obtained by evaporating to dryness at 100° C, the alcoholic solution obtained by boiling 20 grammes of the air-dry pepper with about 110 cc. alcohol of 0·815 specific gravity for two hours, in a glass cask fitted with a back-flow condenser. For genuine pepper the table on page 117 shews this to amount to an average of 8·71 per cent. for black and 7·73 per cent. for white. The extremes in the case of black pepper are 9·06—8·28; and in the case of white pepper 8·92 to 7·22.

In order to determine the influence of rice starch and cocoanut shell upon the alcoholic extract, samples of these were treated with alcohol as in the case of pepper, and the following numbers obtained:—

Alcoholic extract, rice starch	0·90	per cent.
" " cocoanut-shell	23·15	"

The effect of either of these substances in admixture is therefore to lower the extractive. Since, however, black pepper shews a higher average extractive than white, it appears that the addition of pepper dust in undue amount will proportionately raise the amount of alcoholic extractive.

An examination of the synoptical tables appended will shew that in general the amount of alcohol extractive found is consistent with the above deduction, when the microscopic and other examinations furnish sufficiently definite data for an opinion. Owing, however, to the very complex character of the pepper adulterants usually present, it is difficult to interpret the meaning of the number found for alcoholic extract with as great definiteness as could be wished.

The separation of the piperin in the extractive, from the resin which constitutes its main component, has been attempted in several instances; but since the commercial value of a pepper does not in any way depend upon its piperin content, it has not been deemed advisable to carry out this separation in all the samples analyzed.

I have to acknowledge, in conclusion, that I have received great and valuable assistance in the prosecution of this work from Mr. F. X. Lefebvre, and from Miss E. Davidson.

I have the honour to be, sir,
Your obedient servant,
A. McGILL.

BULLETIN No. 21.—MILK IN WESTERN ONTARIO AND MANITOBA.

E. Miall, Esq.,
Commissioner of Inland Revenue.

Sir,—I beg respectfully to recommend for immediate publication the reports which have been addressed to you by Dr. W. H. Ellis, of Toronto, and Professor E. B. Kenrick, of Winnipeg, on milk samples which were collected in Western Ontario and Manitoba during the latter part of last year, and submitted to them for analysis. The tabular statements which accompanied the reports of these public analysts have been reconstructed, in order to insert the names of the vendors, and they constitute the following table, which gives both the origin of the samples, the analytical results and the remarks of the analyst.

I have the honour to be, Sir,
Your obedient servant,
THOMAS MACFARLANE,
Chief Analyst.

8th January, 1891.

Date of Collection	Number of Sample.	Name and Address of Furnisher.	Analysis.			Total Solids.	Specific Gravity at 15° C.	Analyst.	Remarks.
			Water.	Butter Fat.	Other Solids.				
1890.		St. Mary's, Ont.	p. c.	p. c.	p. c.	p. c.	p. c.		
Nov. 10..	10401	James Moore	48·61	6·53	8·85	15·38	....	Dr. W. H. Ellis....	Exceptionally rich in fat.
do 10..	10402	C. W. Couplan	86·77	3·58	9·64	13·22	....	do	Genuine.
do 10..	10403	A. Crone	87·28	4·31	8·41	12·72	....	do	Below the average as to solids not fat.
		Lucan, Ont.							
do 10..	10404	W. Judge	88·78	3·99	7·22	11·21	....	do	Adulterated by admixture with water.
do 10..	10405	J. Hodgins	84·95	6·48	8·56	15·04	....	do	Very rich in fat.
		Sarnia, Ont.							
do 11..	10406	G. Hillin	86·94	4·12	8·93	13·05	....	do	Genuine.
do 11..	10407	C. Derby	87·20	4·53	8·26	12·79	....	do	Below average as to solids not fat.
dc 11..	10408	W. Battle	87·44	4·03	8·52	12·55	....	do	Genuine.
do 11..	10409	G. Carr	85·52	5·69	8·79	14·48	....	do	do
do 11..	10410	Miss E. Ellnor	86·61	5·23	8·15	13·38	....	do	do
do 11..	10411	J. Carr	88·05	4·08	7·86	11·94	....	do	Adulterated by admixture with water.
do 11..	10412	P. McCulloch	86·05	4·98	8·96	13·94	....	do	Genuine.
		Petrolia, Ont.							
do 11..	10413	J. B. Windover	86·62	4·09	9·27	13·36	....	do	do
do 11..	10414	W. Drew	86·73	4·38	8·88	13·26	....	do	do
do 11..	10415	S. Baker	88·16	3·79	8·04	11·83	....	do	Below average as to solids not fat.
do 11..	10416	D. McVicar	87·08	4·16	8·75	12·91	....	do	Genuine.
		Dresden, Ont.							
do 12..	10417	B. Maddin	87·02	3·93	9·04	12·97	....	do	do
do 12..	10418	J. & J. Jeffs	88·06	3·55	8·38	11·93	....	do	Below average as to solids not fat.
12..	10419	Mr. J. A. Harning	86·56	4·56	8·87	13·43	....	do	Genuine.

		CHATHAM, ONT.							
Nov. 13..	10420	E. Kahue	88·47	4·57	6·95	11·52		Dr. W. H. Ellis	Adulterated by admixture with water.
do 13..	10421	R. Moase	88·43	2·78	8·79	11·57		do	Poor in fat, or else skimmed.
do 13..	10423	F. Cartier	88·32	2·88	8·79	11·67		do	Below average as to fat.
do 13..	10424	Sarah Siddell	87·48	4·11	8·41	12·51		do	do solids not fat.
do 13..	10425	T. Smith	88·20	3·36	8·44	11·80		do	do do and fat.
do 13..	10426	T. W. Fenton	87·76	4·08	8·14	12·22		do	do do not fat.
do 13..	10427	W. A. Norton	89·66	3·22	7·11	10·33		do	Adulterated by admixture with water.
		GLENCOE, ONT.							
do 13..	10428	W. Swaiseand	87·84	3·70	8·45	12·15		do	Below average as to solids not fat.
do 13..	10429	Jas. McNeill	91·03	1·69	7·27	8·96		do	Adulterated by admixture with water.
		ST. THOMAS.							
do 14..	10430	John Lyle	89·49	3·11	7·39	10·50		do	do do
do 14..	10431	H. Dunsfore	87·70	3·82	8·47	12·29		do	Genuine.
do 14..	10432	J. Y. Small	87·87	3·98	8·14	12·12		do	Below average as to solids not fat.
do 14..	10433	F. Clark	87·46	3·62	8·91	12·53		do	Genuine.
do 14..	10434	D. Gooding	88·31	3·18	8·50	11·68		do	Below average as to solids and fat.
do 14..	10435	B. Mann	88·83	3·62	7·54	11·16		do	Adulterated by admixture with water.
do 14..	10436	J. Hatch	87·20	4·14	8·65	12·79		do	Genuine.
do 14..	10437	C. Simple	87·99	3·82	8·18	12·00		do	Below average as to solids not fat.
do 14..	10438	F. A. Fitch	88·33	3·90	7·77	11·67		do	Adulterated by admixture with water.
do 14..	10439	C. Hopkins	87·03	4·27	8·70	12·97		do	Genuine.
do 14..	10440	J. Axford	88·20	3·26	8·53	11·79		do	Below average as to solids and fat.
		GUELPH, ONT.							
do 25..	10441	W. W. Kenny	88·14	3·86	8·99	12·85		do	Genuine.
do 25..	10442	John Robinson	86·72	3·91	9·36	13·27		do	do
do 25..	10443	Geo. Bracey	87·59	3·50	8·90	12·40		do	do
do 25..	10444	W. J. Seharis	87·70	3·28	9·01	12·29		do	Below average as to fat.
do 25..	10445	Selina Bostwick	85·91	4·52	9·55	14·08		do	Genuine.
do 25..	10446	Joseph Rydill	88·54	3·02	8·42	11·45		do	Below average as to solids and fat.
do 25..	10447	Mrs. Elizabeth Pender	87·35	3·56	9·08	12·64		do	Genuine.
		PALMERSTON, ONT.							
do 26..	10449	Peter A. Robb	87·32	3·82	8·85	12·67		do	Genuine.
do 26..	10450	C. Batty	87·29	3·73	8·97	12·70		do	do
do 26..	10451	Mrs. John Sewell	87·68	3·27	9·04	12·31		do	Below average as to fat.
do 26..	10452	A. M. Cusack	87·24	3·68	9·07	12·75		do	Genuine.

Date of Collection	No. of Sample.	Name and Address of Furnisher.	ANALYSIS.			Total Solids.	Specific Gravity at 15° C.	Analyst.	Remarks.
			Water.	Butter Fat.	Other Solids.				
1890.		MOUNT FOREST.	p. c.	p. c.	p. c.	p. c.	p. c.		
Nov. 27..	10453	James T. Collis	84·95	5·30	9·74	15·04	....	Dr. W. H. Ellis....	Genuine.
do 27..	10454	James S. Wood	87·87	3·39	8·73	12·12	....	do	Below average as to fat.
do 27..	10455	John McCall	85·72	5·37	8·90	14·27	....	do	Genuine.
do 27..	10456	John Deacon	84·76	3·38	9·86	13·24	....	do	Below average as to fat.
do 27..	10457	Mrs. C. O'Donnell	87·23	3·42	9·34	12·76	....	do	do
		ORANGEVILLE, ONT.							
do 28..	10458	Henry Laberty	85·73	4·93	9·33	14·26	....	do	Genuine.
do 28..	10459	N. Wright	86·94	3·87	9·18	13·05	....	do	do
do 28..	10460	John Rusk	87·45	3·98	8·56	12·54	....	do	do
do 28..	10461	Charles Crocket	85·82	7·67	6·50	14·17	....	do	Adulterated by addition of water; cream has also been added.
do 28..	10462	Wm. P. King	86·06	4·60	9·33	13·93	....	do	Genuine.
do 28..	10463	Edward Clark	84·94	5·67	9·39	15·06	....	do	do
		SHELBURNE, ONT.							
Dec. 2..	10464	R. W. Tuck	88·63	2·61	8·76	11·37	....	do	Below average as to solids and fat.
do 2..	10465	A. Reid	88·64	2·51	8·84	11·35	....	do	do do
do 2..	10466	J. Brundage	84·33	5·79	9·87	15·66	....	do	Genuine.
do 2..	10467	Mrs. Robt. McKay	88·42	0·78	10·79	11·57	....	do	Adulterated by abstraction of cream.
		OWEN SOUND.							
do 3..	10468	Robert Young	87·01	4·14	8·84	12·98	....	do	Genuine.
do 3..	10469	A. McDonald	86·34	4·35	9·31	13·66	....	do	do
do 3..	10470	Geo. Mervyn	85·67	4·84	9·48	14·32	....	do	do
do 3..	10471	Alfred Wilson	86·51	3·98	9·50	13·48	....	do	do
do 3..	10472	James Bruce	85·95	4·53	9·51	14·04	....	do	do
do 3..	10473	W. Harding	84·71	5·85	9·43	15·28	....	do	do
do 3..	10474	Peter Dishane	85·98	5·13	8·88	14·01	....	do	do
do 3..	10475	James Buckly	86·71	4·05	9·23	13·28	....	do	do
do 3..	10476	James Douglas	85·25	7·08	7·65	14·74	....	do	Above the average in fat and below as to solids, not fat.
do 3..	10477	Geo. A. Sargant	86·67	4·43	8·89	13·32	....	do	Genuine.
do 3..	10478	Henry Kennedy	86·43	4·17	9·39	13·56	....	do	do do

			ALLISTON, ONT.							
do	5	10479	Mrs. E. A. Carmichael	87·92	2·41	9·66	12·07	....	do	Below average as to fat.
do	5	10480	Mrs. W. S. Wallace	86·33	4·15	9·51	13·66	....	do	Genuine.
			WINNIPEG, MAN.							
Oct.	27	9434	Alex. Munroe	86·78	4·16	9·06	13·22	1·0333	Prof. E. B. Kenrick.	Genuine.
do	27	9435	do	86·87	4·18	8·95	13·13	1·0325	do	do
do	27	9436	James Brown	86·93	3·86	9·21	13·07	1·0335	do	do
do	27	9437	Duncan McDonald	87·48	3·39	9·13	12·52	1·0333	do	Fat below average.
do	27	9438	Spears & Baxter	87·22	4·24	8·54	12·78	1·0304	do	Genuine.
do	27	9439	McKane & Kirk	86·16	4·22	9·62	13·84	1·0344	do	do
do	27	9440	do	86·41	4·27	9·32	13·59	1·0337	do	do
do	27	9441	E. Goodman	88·39	3·87	7·74	11·61	1·0276	do	Watered.
do	27	9442	A. Jannason	85·77	5·12	9·11	14·23	1·0318	do	Genuine.
do	27	9443	W. Templeton	86·50	4·46	9·04	13·50	1·0323	do	do
do	27	9444	Ketheson & Suary	86·87	3·34	9·79	13·13	1·0354	do	Fat below average.
do	27	9445	Wm. Hodgins	86·24	5·27	8·49	13·76	1·0293	do	Genuine.
do	29	9446	G. Emerson	87·51	4·50	7·99	12·49	1·0280	do	Non-fatty solids below average.
do	29	9447	H. F. Craig	86·32	4·23	9·45	13·68	1·0333	do	Genuine.
do	29	9448	do	83·31	7·51	9·18	16·69	1·0313	do	do partly cream.
do	29	9449	S. Swanson	85·58	4·98	9·44	14·42	1·0337	do	Genuine.
do	29	9450	Gillispie & Suary	87·38	3·67	8·95	12·62	1·0326	do	do
do	29	9451	do	87·21	3·68	9·11	12·79	1·0331	do	do
do	29	9452	J. H. Elliott	86·10	4·42	9·48	13·90	1·0335	do	do
do	29	9453	do	86·22	4·38	9·40	13·78	1·0338	do	do
do	29	9454	Robt. Jackson	87·17	3·59	9·24	12·83	1·0337	do	do
do	29	9455	J. W. Menard, St. Boniface	86·06	4·93	9·01	13·94	1·0315	do	do
do	29	9456	Thos. Twidle	86·76	5·10	8·14	13·24	1·0280	do	Non-fatty solids below average.
do	29	9457	S. Helmerson	85·80	5·06	9·14	14·20	1·0322	do	Genuine.
do	29	9458	A. W. Haney	85·49	6·36	8·15	14·51	1·0274	do	Non-fatty solids below average.
do	29	9459	do	87·44	4·75	7·81	12·56	1·0272	do	do do
do	29	9460	W. Bussut, St. Boniface	85·77	5·18	9·05	14·23	1·0323	do	Genuine.
do	29	9461	M. Panard	84·94	6·00	9·06	15·06	1·0311	do	do
do	29	9462	A. Palson	85·32	5·28	9·40	14·68	1·0333	do	do
do	31	9463	S. Evans	86·69	4·97	8·34	13·31	1·0291	do	Non-fatty solids below the average.
do	31	9464	N. D. Mario	86·43	4·47	9·10	13·57	1·0322	do	Genuine.
do	31	9465	H. A. Seed	87·08	3·82	9·10	12·92	1·0322	do	do
do	31	9466	Raddiger & Co	87·06	3·43	9·51	12·94	1·0342	do	do
do	31	9467	B. Frank	86·83	4·23	8·94	13·17	1·0320	do	do
do	31	9468	Mrs. M. Bell	87·77	2·84	9·39	12·23	1·0345	do	Partly skimmed.
do	31	9469	J. Ostrander	86·48	4·01	9·51	13·52	1·0338	do	Genuine.
			BRANDON, MAN.							
Nov.	10	9470	B. Sherrin	86·79	3·98	9·23	13·21	1·0335	do	do
do	10	9471	do	86·59	4·48	8·93	13·41	1.0320	do	do

Date of Collection.	Number of Sample.	Name and Address of Furnisher.	Analysis. Water.	Analysis. Butter Fat.	Analysis. Other Solids.	Total Solids.	Specific Gravity at 15° C.	Analyst.	Remarks.
1890.		BRANDON, MAN.—*Continued.*	p. c.	p. c.	p. c.	p. c.	p. c.		
Nov. 10..	9472	J. Priestly	87·44	3·89	8·67	12·56	1·0318	Prof. E. B. Kenrick.	Genuine.
do 10..	9473	do	82·47	9·42	8·11	17·53	1·0250	do ..	do partly cream.
do 10..	9474	J. Miles................	87·09	4·24	8·67	12·91	1 0311	do ..	do
do 10..	9475	do	88·93	3·51	7·56	11·07	1·0267	do ..	Watered.
		PORTAGE LA PRAIRIE.							
do 31..	9476	J. S. Telfer................	86·79	4 48	8·73	13·21	1·0315	do ..	Genuine.
do 31..	9477	do	87·00	4·36	8 64	13·00	1·0310	do ..	do
do 31..	9478	R. Miller................	84·30	5·84	9·86	15·70	1·0343	do ..	do
do 31..	9479	R. Kitchen................	86·19	4·31	9·50	13·81	1·0336	do ..	do

SCHOOL OF PRACTICAL SCIENCE.
TORONTO, 29th December, 1890.

The Commissioner of Inland Revenue.

SIR,—I have the honour to submit my report on the work done in my laboratory during the past six months.

During the month of August I analysed sixty-four samples of milk collected from various places in my district as below:

	Samples.
Peterborough	6
Ashburnham	1
Lindsay	5
Beaverton	5
Orillia	8
Barrie	7
Bradford	7
Newmarket	7
Aurora	6
Toronto	12

The weather, when these samples were taken was extremely hot and before I was able to analyze them they were nearly all sour and curdled to such a degree as to render the analysis by the ordinary method very difficult and unreliable.

Of the sixty-four samples, thirty-six fell below the standard of 3·5 per cent. fat and twenty-three below that of 12 per cent. total solids.

In November and December eighty samples, of which two were lost in transit from breakage, were collected in my district and sent to me for analysis. The seventy-eight samples which reached me were, most of them, in good condition, only a few of the first sent being sour or curdled. The results of the analysis of these seventy-eight samples is given in the preceding table. The analysis were made by the Asbestos method in duplicate. In the table only one of these duplicate analyses is given.

In Bulletin No. 1, the chief analyst suggested the following limits for milk of good standard quality:

	Per cent.
Total solids	12·0
Fat	3·5
Solids other than fat	8·5

The results of the analyses of these seventy-eight samples of milk may be summarized as follows:—

	Total Solids.	Fat.	Other Solids.
Maximum	15·67	7·66	10·79
Mean	12·84	4·10	8·74
Minimum	10·33	0·78	6·51

The average of the analyses reported in Bulletin No. 1 is:

	In all Canada.	In Toronto Dist.
Total solids	12·48	12·27
Fat	3·86	3·56
Solids not fat	8·62	8·71

It appears, therefore, that the average milk sold in the market in the district of Toronto is at present richer in fat and other solids than was the average milk taken from herds of cows all over Canada in the summer of 1888.

It is quite certain, however, that some of these samples were not genuine milk.

The Society of Public Analysts have established the limit of 3 per cent. for fat and 8·5 for solids not fat, and report all milk as adulterated which fall below these limits.

Of these seventy-eight samples, 24, or 30 per cent., fall below these limits as to solids not fat, and seven samples, or 9 per cent., fall short in fat. In one or both respects twenty-nine samples, or 37 per cent., are below the society's limits.

I have elsewhere recorded my opinion that these limits are too high. In 1888 I found 22 per cent. of the samples of milk from herds of cows taken in my presence to fall below them. Deducting twenty-two from thirty-seven we get fifteen, that is, that there are 15 per cent. more of these samples below the limit than I found in genuine milk.

In my report of 1888 I expressed my belief that it is impossible to assert that a milk has been adulterated by admixture with water if the solids not fat are higher than 8 per cent., or that it has been skimmed if the fat is more than 2·5 per cent.

In expressing my opinion as to the quality of these samples, I have been guided by these considerations. All below 8 per cent. solids not fat I have reported watered. All below 2·5 per cent. fat I have reported skimmed.

The number of samples so reported as adulterated is eleven, two skimmed and nine watered; in all 14 per cent.

In the following table the samples taken from each locality are given as of good standard quality, or otherwise, according to the standard suggested in Bulletin No. 1.

Locality	Of Good Standard Quality.	Below Standard.	Total.
St. Mary's	2	1	3
Lucan	1	1	2
Sarnia	5	2	7
Petrolia	3	1	4
Dresden	2	1	3
Chatham	0	7	7
Glencoe	0	2	2
St. Thomas	3	8	11
Guelph	4	3	7
Palmerston	3	1	4
Mount Forest	2	3	5
Orangeville	6	0	6
Shelberne	1	3	4
Owen Sound	10	1	11
Alliston	1	1	2
Total	43	35	78

I have the honour to be, Sir,
Your obedient servant,
W. H. ELLIS, *Analyst*.

St. John's College,
Winnipeg, 17th November, 1890.

To the Commissioner of Inland Revenue,
Ottawa.

Sir,—I have the honour to submit my report on certain samples of milk collected in some of the larger towns of Manitoba and submitted to me for analysis during the latter part of October and early part of the present month.

The following schedule gives the number of good, inferior and adulterated samples respectively, as obtained from each town:—

—	Good.	Below Average.	Partly Skimmed.	Watered.	Total.
Winnipeg	27	7	1	1	36
Portage la Prairie	4	0	0	0	4
Brandon	5	0	0	1	6
Total	36	7	1	2	46

The samples classed as "below average" must be regarded as doubtful, being either good milk more or less skimmed or watered, or naturally poor milk deficient in either butter-fat or other solids.

In drawing up this table I have been careful to use the terms employed in the Bulletins on Milk, issued by the Inland Revenue Department, and in forming an opinion on the samples I have been guided by the provisional standards adopted by the Chief Analyst for Canadian milk. It is, however, open to question whether milk samples from different parts of Canada should all be judged by one standard. As pointed out in Bulletin No. 1 the average in Canada for the total solids in milk is at least one-half of one per cent. lower than the standard adopted in the State of Massachusetts for milk "of good standard quality."

The averages obtained for the above forty-six samples are as follows:—

Total solids	13·52
Butter fat	4·57
Other solids	8·95

These figures, it will be seen, are very much higher than the averages for both market and normal samples from nearly all those towns of Eastern Canada for which averages are given in Bulletins Nos. 1, 2, 9 and 11.

The above averages contain the results of two watered samples and one partly skimmed, together with at least seven analyses of doubtful samples. On the other hand they include several samples in which the fat was abnormally high, rendering it probable that in some instances the milk was not properly mixed before taking the sample. But even if we exclude the samples consisting in part of cream, it will be found that the general averages for both fat and other solids are markedly higher than the averages obtained for genuine samples of whole milk analyzed in the Department Laboratory at Ottawa. In making these comparisons it should not be forgotten that the present is just the time of year when the highest averages may be expected. The obvious practical result of judging exceptionally rich milks by standards adapted for milk of average quality is that a larger proportion of adulterated samples escape detection.

I may add that the method employed for the analysis of these samples was essentially the one in use in the Inland Revenue Laboratory at Ottawa—a method which in my hands has been found to yield results practically identical with those obtained by the method in use in England by the Society of Public Analysts.

I have the honour to be, Sir,
Your obedient servant,
EDGAR B. KENRICK, *Analyst.*

BULLETIN No. 22.—FERTILIZERS, 1891.

E. Miall, Esq.,
Commissioner of Inland Revenue.

Sir,—In submitting the following report regarding the agricultural fertilizers, which are offered for sale in the Dominion of Canada this year, it becomes necessary to advert to the amendment which the Fertilizers Act underwent during last session of Parliament, and which were assented to on the 24th April, 1890. The following are the principal changes which these amendments have caused in the administration of the Act and the trade in fertilizers:

1. Every manufacturer or importer is obliged to declare to the department, and describe on the packages, the nature of the materials from which the fertilizer has been manufactured.

2. A fee of $3 must be paid for the analysis of each sample submitted to the department.

3. In publishing the results of the analysis, a statement must be given at the same time "showing the relative value of each fertilizer calculated from its contents in fertilizing ingredients at their current market value."

The following is a list of the fortilizers sent in for analysis this year, containing the same information as in former reports, with the addition of that received from the manufacturers regarding the materials contained in, or used in the production of, the various qualities.

TABLE I.

RECORD of Fertilisers Analysed.

No.	Designation.	Name of Manufacturer.	By whom sent.	From what Materials produced.	Cash selling price.
189	"Animal Fertiliser"	F. Rowlin, Fertiliser and Casing Works, Hamilton, Ont.	Manufacturer		
190	"Bone Meal"	Jackson Johnson, Warkworth, Ont.	do		
191	"Bone Meal"	Provincial Chemical Fertiliser Co., St. John, N.B.	De B. Carritte, Manager		$42.50 per ton (less 10 p.c.)
192	"Wood Ashes"	F. R. Lalor, Dunnville, Ont.	Manufacturer		
193	"Imperial Superphosphate"	Provincial Chemical Fertiliser Co., St. John, N.B.	De B. Carritte, Manager	Dissolved bone black, meat, bone and blood, tankage, and fish bone, and muriate of potash.	$38.50 per ton (less 10 p.c.)
194	"Special Potato Phosphate"	do do	do	do do	$40.50 per ton (less 10 p.c.)
195	"Soluble Pacific Guano"	W. D. Stewart & Co., 7 Exchange Place, Boston, Mass.	Manager		
196	"Ohlendorff's Superphosphate of Lime."	The Anglo-Continental Guano Works, London, Eng.	Manufacturers		
197	"Fertiliser"	James L. Grant & Co., Ingersoll, Ont.	C. C. L. Wilson, Manager	Tankage, bones and blood	$20.00 per ton.
198	"Complete Fertiliser"	F. Rowlin, Fertiliser and Casing Works, Hamilton, Ont.	Manufacturer		$30.00 "
199	"Pure Animal Fertiliser"	do do	do		$25.00 "
200	"Pure Fine Bone Meal"	do do	do		$40.00 "
201	"Superphosphate of Lime"	The Standard Fertiliser and Chemical Co., Smith's Falls, Ont.	R. J. Brodie, Manager	Apatite, bone charcoal and sulphuric acid.	$15.00 "
202	"Special Fertiliser"	do do	do	Apatite, bone charcoal, sulphuric acid, potash, ammonia, magnesia salts and nitrate of soda.	$37.50 "
203	"No. 1 Fertiliser"	do do	do	do do	$30.00 "
204	"Fruit Tree Fertiliser"	do do	do	do do	$30.00 "
205	"Standard Fertiliser"	do do	do	do do	$32.75 "
206	"Nitrate of Soda"	do do	do		

207	"Nitrate of Soda"		The Steele Bros. Co., Toronto, Ont.		
208	"Guano"		do		$35.00 "
209	"Lawn Fertiliser"	The Standard Co., Boston, Mass.	do		$3.50 per 100 lbs.
210	"Food for Plants"	do do	do		12½ cents per lb.
211	"Compound Fertiliser"	Wm. Davies & Co., Pork Packers, &c., Toronto.	Manufacturers	Dried blood, bone and tankage	
212	"Bone Meal"	W. P. Churchill, Yarmouth, N.S.	Manufacturer		$35.00 per ton.
213	"Farmers' Pride"	W. A. Freeman, Dominion Fertiliser and Casing Works, Hamilton, Ont.	do	Blood, bone, meat, potash salts and sulphuric acid.	$30.00 "
214	"Grape Food"	do do	do	do do	$40.00 "
215	"Bone Meal" (general fertiliser)	do do	do	do do	$40.00 "
216	"Dissolved Bone"	do do	do	do do	$38.00 per ton.
217	"Sure Growth"	do do	do	do do	$40.00 "
218	"Animal Fertiliser"	do do	do	do do	$35.00 "
219	"Flower Lawn and Park Fertiliser"	do do	do	do do	$12.50 per case (50 pkgs.)
220	"Bone Dust"	Samuel Archibald, Truro, N.S.	do	Bones which have been boiled	$38.00 per ton.
221	"Fertiliser"	do do	do	Bones, bone charcoal, sulphuric acid, with the addition nitrate of soda, potash salts, plaster and ashes.	$32.00 "
222	"Bradley's XL. Superphosphate"	Bradley Fertiliser Co., Boston, Mass.	G. C. Miller, Middleton, N.S		$32.50 "
223	"The Reliance"	G. H. Nichols & Co., Capleton, P.Q.	Manufacturers	Apatite, sulphuric acid, sulphate of ammonia, nitrate of soda and potash salts.	$27.00 "
224	"The Victor"	do do	do	do do	$30.00 "
225	"The Royal Canadian"	do do	do	do do	$38.00 "
226	"The Capelton Superphosphate"	do do	do	Apatite and sulphuric acid.	
227	"No. 1 Superphosphate"	do do	do	do do	
229	"Ground Bone"	Pidgeon & Mosher, Windsor, N.S.	do	Bone, animal matter, nitrate of soda and potash salts.	$35.00 "
230	"Eureka Phosphate"	do do	do	do do	$36.00 "

TABLE I—Record of Fertilisers Analysed—*Concluded.*

No.	Designation.	Name of Manufacturer.	By whom sent.	From what Materials produced.	Cash selling price.
231	"Eureka Potato Manure"	Pidgeon & Mosher, Windsor, N.S.	Manufacturers	Bone, animal matter, nitrate of soda and potash salts.	$38.50 per ton.
232	"Westport Fertiliser"	J. O. Morrison, Westport, N.S.	Manufacturer	Fish offal, salt, soot, copperas and sulphuric acid.	
233	"Ceres' Superphosphate"	Messrs. Jack & Bell, Chemical Fertiliser Works, Halifax, N.S.	Manufacturers		
234	"Medium Bone"	do do	do		
235	"Bone Meal"	do do	do		
236	"Reid's Superphosphate of Lime"	Thos. Reid, St. John, N.B.	Manufacturer	....	$40.00 "
237	"High Grade Ammoniated Bone Superphosphate."	E. Frank Coe, 16 Burling Slip, New York	do	Dried blood, meat, fish guano, bone, phosphatic guano, sulphate of potash and oil of vitriol	
238	"Potato Fertiliser"	do do	do	do do	
239	"Bowker's Ammoniated Food for Flowers."	Bowker Manufacturing Co., Boston, Mass.	J. A. Simmers, 147 King St. East, Toronto.		
240	"Genuine Peru Guano"	Mapes Formula Guano Co., New York.	do do		
241	"Bone Meal"	....	Wm. Rennie (vendor), Seedman, Toronto.		
242	"Blood Manure"	....	do do		
243	"Croft's Indian Bone Meal, No. 4"	Imported	Lomer, Rohr & Co., Montreal		
244	"Croft's Indian Bone Meal, No. 5"	do	do do		

The results of the analyses of these samples are given in Table II, which also states, in the most of cases, the percentages of fertilizing constituents which the manufacturers guarantee them to contain. Certificates of analysis have not in all cases been supplied by the vendors, and frequently the quantities guaranteed are mere approximations. This must be remembered in comparing these with the percentages as ascertained in this laboratory.

Table II also contains a column in which is stated the "relative value" of the fertilizers. It must not be supposed that these values indicate the prices at which the goods ought to be sold to the consumer, because, in calculating them, no regard whatever has been paid to the cost of manufacture or mixing. The Act only requires that the *relative* value should be given, evidently in order that a comparison should be instituted among the fertilizers themselves. The manner prescribed by the Act has been followed in estimating the values, and the following rates, which correspond roughly to the values of the fertilizing ingredients in wholesale Canadian markets, have been used in the calculations:—

	Cents. per lb.
Nitrogen in ammonia salts or nitrates	14
Organic nitrogen in ground bone, fish, blood or tankage	14
Phosphoric acid soluble in water	7
do soluble in ammonium citrate	6½
do as contained in the Thomas phosphate powder	2½
do in ground bone and tankage	6
do in finely-ground rock phosphate	2
Potash as contained in potashes or pearl ashes	7
do as contained in wood ashes	6
do as contained in high grade potash salts	5½
do as contained in kainite if imported in bulk	3½

Some of the fertilizers manufactured in Canada still leave much to be desired as regards their fineness and evenness, and it has not been found advisable to state the relative value of the following samples on account of their coarseness: Nos. 190, 212, 220, 229 and 234.

TABLE II.

ANALYSES of Fertilisors.

No. of Sample.	NAME OR BRAND OF FERTILISER.	NITROGEN.		PHOSPHORIC ACID.					Potash.	Moisture.	Relative value per ton of 2,000 lbs.
		Total; including that of Nitric Acid or Ammonia if present.	Total; calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.			
		Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	$ cts.
189	"Animal Fertiliser"—										
	Guaranteed		6 to 7				10 to 11			5 to 6	
	Found	4·84	5·88				12·14	12·14		4·80	28 11
190	"Bone Meal"—										
	Guaranteed		6·00				21·15		0·28		
	Found	4·17	5·06	19·35			19·35	19·35	0·22	8·97	
191	"Bone Meal"—										
	Guaranteed		3·10				24·14			9·25	
	Found	2·56	3·11				25·60	25·60		9·44	37 89
192	"Wood Ashes"—										
	Guaranteed										
	Found						1·43	1·43	7·08	1·36	10 21
193	"Imperial Superphosphate"—										
	Guaranteed		3·15				12·82		1 to 2		
	Found	2·32	2·82	5·06	1·73	4·71	11·50	11·50	0·85	12·38	22 37
194	"Special Potato Phosphate"—										
	Guaranteed		2·50 to 3				12 to 13		6 to 8		
	Found	2·22	2·70	4·67	2·52	4·32	11·50	11·50	5·40	11·95	26 88
195	"Soluble Pacific Guano"—										
	Guaranteed		2·75 to 3·50	7 to 9	1·50 to 3	2 to 4	10 to 16		2 to 3·50	15 to 18	
	Found	2·68	3·26	8·22	1·76	0·88	10·86	9·98	1·87	13·47	23 61
196	"Ohlendorff's Superphosphate of Lime"—										
	Guaranteed						16·31				
	Found			16·32	0·18	1·20	17·70	16·50		13·55	23 56
197	"Fertiliser"—										
	Guaranteed		8·11				15·54			5·82	
	Found	6·01	7·30				15·69	15·69		5·23	35 65
198	"Complete Fertiliser"—										
	Guaranteed		4 to 5				14 to 15		5 to 6	4 to 5	
	Found	4·36	5·30			13·25	13·25	13·25	5·80	5·09	34 20

199	"Pure Animal Fertiliser"—										
	Guaranteed		4 to 5				15 to 16				
	Found	5·63	6·84				13·15	13·15		7·22	31 54
200	"Pure Fine Bone Meal"—										
	Guaranteed		1½ to 2				29 to 30				
	Found	2·10	2·55				28·50	28·50		4·97	40 08
201	"Superphosphate of Lime"—										
	Guaranteed			11 to 13			14 to 16				
	Found			8·09	1·29	5·57	14·95	9·38		12·79	15 22
202	"Special Fertiliser"—										
	Guaranteed		3½ to 4½	8 to 10			10 to 12		7 to 8		
	Found	3·14	3·81	5·95	1·15	5·43	12·53	7·10	6·06	10·04	27 15
203	"No. 1 Fertiliser"—										
	Guaranteed		1½ to 2¼	9 to 11			12 to 14		1 to 1½		
	Found	1·80	2·18	7·59	1·56	5·67	14·82	9·15	1·78	12·81	21 83
204	"Fruit Tree Fertiliser"—										
	Guaranteed		2 to 3	8 to 10			10 to 12		8 to 10		
	Found	1·79	2·17	6·70	1·06	3·99	11·75	7·76	8·80	11·15	26 60
205	"Standard Fertiliser"—										
	Guaranteed		2½ to 3½	9 to 11			11 to 13		2 to 2¼		
	Found	2·81	3·42	6·95	1·37	5·35	13·67	8·32	2·53	12·05	24 17
206	"Nitrate of Soda"—										
	Guaranteed		19·42								
	Found	15·48	18·8								43 34
207	"Nitrate of Soda"—										
	Guaranteed										
	Found	15·46	18·78								43 28
208	"Guano"—										
	Guaranteed		4·17	16·23			22·26		4·21	15·40	
	Found	3·57	4·34		14·57	7·89	22·46	14·57	5·04	11·43	37 76
209	"Lawn Fertiliser"—										
	Guaranteed		5 to 6				8 to 9		4 to 6		
	Found	4·63	5·62	3·41	2·83	1·04	7·28	6·24	5·06	6·08	27 14
210	"Food for Plants"—										
	Guaranteed		2·61	12·99					3·80		
	Found	1·48	1·80	9·87	2·04	1·51	13·42	11·91	5·09	10·04	26 56
211	"Compound Fertiliser"—										
	Guaranteed		7·84	traces.		10·37			0·25	5·65	
	Found	6·62	8·04		9·15	3·50	12·65	12·65	0·63	4·37	34 37
212	"Ground Bone"—										
	Guaranteed										
	Found	3·93	4·77				26·91	26·91		3·95	
213	"Farmers' Pride"—										
	Guaranteed		1 to 2				5 to 7		2½ to 3½		
	Found	4·46	5·42	1·77	2·59	2·46	6·82	6·82	3·36	4·12	24 81
214	"Grape Food"—										
	Guaranteed		2 to 3				8 to 10		6 to 8		
	Found	4·28	5·20	4·30	5·45	1·38	11·13	11·13	5·73	6·02	32 76
215	"Bone Meal"—										
	Guaranteed		1½ to 2				20 to 22				
	Found	4·45	5·40				23·07	23·07		4·93	40 14

TABLE II.—ANALYSES of Fertilisers—*Continued.*

No. of Sample.	NAME OR BRAND OF FERTILISERS.	NITROGEN.		PHOSPHORIC ACID.					Potash.	Moisture.	Relative value per ton of 2,000 lbs.
		Total; including that of Nitric Acid and Ammonia if present.	Total; calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.			
		Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	$ cts.
216	"Dissolved Bone"—										
	Guaranteed		2 to 3				11 to 13				
	Found	3·17	3·85	2·65	6·16	1·71	10·52	10·52		4·13	22 64
217	"Sure Growth"—										
	Guaranteed		3½ to 5				6 to 8		5 to 7		
	Found	3·77	4·58	3·79	6·03	0·50	10·32	10·32	4·61	6·10	29 14
218	"Animal Fertiliser"—										
	Guaranteed		3 to 5				5 to 6				
	Found	4·21	5·11	3·79	1·39	0·28	5·46	5·46			19 24
219	"Flower, Lawn and Park Fertiliser"—										
	Guaranteed		2½ to 4				8 to 10		2½ to 3½		
	Found	6·47	7·86	5·06	2·50	1·95	9·51	9·51	5·80	4·71	36 88
220	"Bone Dust"—										
	Guaranteed										
	Found	4·05	4·92				20·74	20·74		11·45	
221	"Fertiliser"—										
	Guaranteed										
	Found	1·40	1·70		5·40	0·72	6·12	6·12	7·55	24·01	19 73
222	"Bradley's X L Superphosphate"—										
	Guaranteed		2½ to 3½	8 to 10			10 to 12		1 to 2		
	Found	2·32	2·82	7·71	1·42	1·47	10·60	9·13	1·08	13·62	20 86
223	"The Reliance"—										
	Guaranteed		2·00					6 to 7	2 to 3		
	Found	2·34	2·84	6·74	1·78	2·60	11·12	8·52	2·10	12·97	21 54
224	"The Victor"—										
	Guaranteed		2 to 3					7 to 9	3 to 4		
	Found	2·42	2·94	7·84	0·60	2·18	10·72	8·44	2·88	12·98	22 43
225	"The Royal Canadian"—										
	Guaranteed		4 to 5					9 to 11	5 to 6		
	Found	3·85	4·68	8·07	0·79	1·29	11·05	9·76	6·90	11·37	32 14

226	"The Capelton Superphosphate"—										
	Guaranteed							8 to 10			
	Found			10·95	1·28	2·15	14·38	12·23		16·04	17 85
227	"No. 1 Superphosphate"—										
	Guaranteed							11½ to 14			
	Found			12·18	0·80	1·86	14·84	12·98		28·10	18 83
	"Ground Bone"—										
	Guaranteed		3·05 to 4				24 to 25½		01· to 02		
	Found	5·18	6·29				20·74	20·74		9 56	
230	"Eureka Phosphate"—										
	Guaranteed		3·00	6·00		4·00			2·50		
	Found	2·95	3·58	3·41	2·58	2·95	8·94	8·94	2·59	17·91	21 46
231	"Eureka Potato Manure"—										
	Guaranteed		3·00	7·00		2·00			5·00		
	Found	3·79	4·60	4·05	2 27	2·74	9·06	9·06	5·36	24·10	28 14
232	"Westport Fertiliser"—										
	Guaranteed										
	Found		trace.				0·64	0·64		13·01	0 76
233	"Ceres Superphosphate"—										
	Guaranteed										
	Found	2·04	2·48	3·92	1·43	3·71	9·06	9·06	1·91	10·43	19 41
234	"Medium Bone"—										
	Guaranteed										
	Found	4·86	5·90				21·86	21·86		9·65	
235	"Bone Meal"—										
	Guaranteed										
	Found	5·00	6·07				20·74	20·74		8·77	38 88
236	"Reid's Superphosphate of Lime"—										
	Guaranteed		5·12				11·87			13·75	
	Found	6·29	7 64	0·88	5·39	4·21	10·48	10·48		13·42	30 90
237	"High Grade Ammoniated Bone Superphosphate"										
	Guaranteed		2½ to 3			1 to 2		9 to 12	3 to 4		
	Found	4·12	5·00	8·35	0·01	1·61	9·97	9·97	4·61	7·08	30 00
238	"Potato Fertiliser"—										
	Guaranteed		2½ to 3½			2 to 2½		9 to 11	11 to 13		
	Found	3 00	3·64	7·84	1 95	1·33	11·12	11·12	6·13	8·71	32 65
239	"Bowker's Ammoniated Food for Flowers"—										
	Guaranteed										
	Found	6·09	7·40	7·84	2·25	traces.	10·09	10·09	2·78	9·70	33 86
240	"Genuine Peru Guano"—										
	Guaranteed										
	Found	7·50	9·11		12·79	1·78	14·57	12·79	3·18	18·61	41 67
241	"Bone Meal"—										
	Guaranteed		6·00				21·15		0·23		
	Found	5·35	6·50		10·18	9·88	20·06	26·06		7·50	40·07

TABLE II.—ANALYSES of Fertilisers.—*Concluded.*

No. of Sample.	NAME OR BRAND OF FERTILISER.	NITROGEN.		PHOSPHORIC ACID.					Potash.	Moisture.	Relative value per ton of 2,000 lbs.
		Total; including that of Nitric Acid and Ammonia if present.	Total; calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total Available.			
		Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	$ cts.
242	"Blood Manure"—										
	Guaranteed	....	7·84	....	....	....	10·37	....	0·25	5·65	....
	Found	7·59	9·22	....	8·38	4·60	12·98	12·98	....	5·44	37·66
243	"Croft's Indian Bone Meal" No. 4—										
	Guaranteed	....	4 to 5	....	....	....	23 to 25·03	....	....	....	....
	Found	3·75	4·56	....	10·50	10·33	20·83	20·83	....	7·01	36·54
244	"Croft's Indian Bone Meal" No. 5—										
	Guaranteed	....	3½ to 4	....	....	....	20·07 to 23	....	....	....	....
	Found	3·30	4·01	....	12·30	4·30	16·60	16·60	....	6·22	30·39

An attempt was recently made from this office to ascertain the extent of the fertilizer trade in Canada, but the returns obtained were incomplete and can only serve as the foundation for an approximative estimate. The latter cannot be placed higher than 3,400 tons, which was the probable quantity of fertilizers sold in the Dominion last year. From this it appears that the trade is as yet in its infancy, and that "high farming" is still unknown in Canada. The prices here are, on the whole, lower than in the United States, where at least a million tons are made use of annually.

Canadian farmers seem to entertain a prejudice against the use of fertilizers, owing to the apparent high prices charged for them. In a former report addressed to you, dated 20th December, 1886, and published in Supplement III to the departmental report of that year, I called attention, among other matters, to the fact that the cost of fertilizers is greatly increased by the admixture of substances containing nitrogen, which ingredient might be saved by the exercise of a little care on the part of the farmer. Since you may possibly authorize the publication of this report, I take this opportunity of mentioning a few particulars connected with this subject which may be of interest to agriculturists generally.

If we take the case of an ordinary compound fertilizer, containing, say, 3·6 per cent of nitrogen, the cost to the manufacturer of introducing that quantity into it amounts to $10 per ton, which the farmer must pay if he purchases, and which he is perfectly capable of saving in his own stables or producing upon his own farm. It has long been known that stable-yard manure experiences considerable loss of its fertilizing constituents, but more especially of nitrogen, when left to itself in the dung heap. According to the experiments of Wolff, this loss amounts to 55 per cent of the nitrogen contained in fresh manure from horned cattle. The later experiments of Heiden and Holdefleiss place it at 23·4 per cent. These results were obtained when ordinary reasonable care is taken of the manure, but give no data for estimating the loss which occurs when, as is most frequently the case in Canada, the manure is treated with the grossest neglect. It is safe to assume that generally 50 per cent of the nitrogen contained in the barnyard manure of this country returns unutilized to the atmosphere. Assuming that an average quantity of 36,000 lbs. is produced annually by each animal, and that it contains 0·4 per cent of nitrogen, it follows that a loss of 72 lbs. nitrogen, worth $10.08, takes place for each head of cattle. This loss can be prevented by strewing amongst the manure in the stables about 700 lbs. ground plaster for each head, at a cost of about $2.50 per annum. By doing this the farmer would be relieved from the necessity of purchasing the nitrogen of agricultural fertilizers.

Not only can the farmer thus save the nitrogen of his barnyard manure, but he can actually increase the stock of it stored away in his fields, products and dung heaps. Recent investigation has shown that certain crops have the power of appropriating the nitrogen of the atmosphere, and that, by a judicious course of crop rotation, the farmer may take advantage of this fact to enrich his farm. For more than a century, agricultural chemists have discussed the question as to whether free atmospheric nitrogen can be assimilated by plants, and probably the controversy would have continued without result to the present hour had not a practical agriculturist, named Schultz, in North Germany, thrown light upon the subject by means of his trials on the large scale, and the manner in which he described and explained these to his countrymen. König, of Munster, gives the following summary of Schultz experience:—

"Schultz acquired the farm Lupitz in the year 1855; its soil consisted of a poor, cold diluvial sand; the profit in working it was very small. Lupines yielded indeed as fodder tolerable results, but when used as green manuring for rye or oats, no return was obtained from them. The application of artificial manures produced good crops, but they did not pay; burnt lime showed itself to be too heating. The use of manure was more favourable, especially when fertilizers containing phosphoric acid were used at the same time. But at the best the total result was not satisfactory.

"Shortly after Schultz acquired Lupitz the great discovery of potash salts was made, and about 1860 they began to be produced from the mines of Stassfurth. Schultz made up his mind to try them as manure and he obtained the most surprising results. After lupines had shown themselves to be useless as forerunners of grain, they were excluded from the rotation, and grown on a separate field without any manuring and alternating with sheep pasture. But the harvest on these became worse and worse, until the field in question became quite lupine sick. Schultz made his first trial on this field, manuring it with 300 lbs. kainite per morgen (1 Prussian morgen = 0·631 acre); the sickness was at once cured, and for twenty-five years afterwards Schultz has grown lupines on this ground without interruption, always with the application of 300 lbs. kainite. Schultz obtained similar good results on the ground which had received the marl, by the application of potash salts. This ground had indeed yielded well with lupines for two years after the application of the marl, but in the third year they sickened here too. When, however, the 300 lbs. kainit were applied here and ploughed in in the fall, the ground was cured, although an application of phosphates had not produced the desired results.

"The favourable influence which the manuring with kainite or potash salts had exerted on lupines induced Schultz to try them on grain, in conjunction with phosphates. But in this case he obtained contradictory results, according to the nature of the crop which preceded the grain. For instance, while grain sowed after lupines and manured with potash and phosphates yielded very good and remunerative harvests, these were not to be obtained if grain was grown after grain or after potatoes. This behaviour of these crops was explained by Schultz in this way, that lupines as deep rooted plants leave in the soil after harvest a residue of root, in which a considerable amount of nitrogen has accumulated—an amount sufficient to supply the wants of the following grain crop; that, on the other hand, the application of potash and phosphates to grain, after a preceding grain crop, is without effect, for the reason that the latter had consumed the stock of nitrogen. Grain crops always reduce this stock—never increase it. Schultz has given the name nitrogen collectors to the lupines and similar plants, while grains are called nitrogen consumers. His system of rotation is therefore the following: Sow first nitrogen collectors (lupines, pease, beans, vetches, clover, lucerne, serradella, &c.), or, as they have been called, renovating crops, and give them 300 lbs. kainite per morgen, with perhaps an addition of 20 lbs. phosphoric acid. After harvesting the nitrogen collectors sow a nitrogen consumer, raising a grain or exhausting crop, giving it also 300 lbs. kainite and 20 lbs. phosphoric acid. The grain crop is perfectly successful, because the first crop left behind it nitrogen enough to supply the wants of the grain. In this way the keeping of stock, which is expensive on a poor sandy soil, can be reduced, and the purchase of nitrogenous fertilizers dispensed with, because the nitrogen collectors are able to stock the soil with that valuable element."

The foregoing description is taken from Professor Königs' "Stickstoff Vorrath," published in 1887 (Paul Parey, Berlin). It was in 1884, nearly thirty years after the purchase of his sandy farm, that Schultz, of Lupitz, published the results of his experience, although they did not contain anything very new, and although they only confirmed experiences still older than his own. But his case was surprising, and his explanation of the cause of his successful farming challenged the attention of scientific agriculturists. The consequence has been the issue of many pamphlets on the subject, and an activity in the region of agricultural experimenting which has continued for five or six years, and is not yet ended. Atwater, Wagner, Heiden, Hellriegel, and many others have participated in these investigations, and Professor Woods, of the Storrs Agricultural School in Connecticut, gives the following general conclusions as the result of the work up to the present:—

"1. Pease, alfalfa, serradella, lupine, clover in all probability, and apparently leguminous plants in general, are able to acquire large quantities of nitrogen from the air during their period of growth.

"2. There is scarcely room to doubt that the free nitrogen of the air is thus acquired by plants.

"3. That there is a connection between root tubercles and this acquisition of nitrogen is clearly demonstrated. What this connection is, what are the relations of micro-organisms to the root tubercles and the acquisition of nitrogen, and in general how the nitrogen is obtained, are questions still to be solved.

"4. The cereals with which experiments have been completed have not manifested this power of acquiring nitrogen, nor do they have such tubercles as are found on the roots of legumes.

"5. In the experiments here reported, the addition of soil infusions did not seem necessary for the production of root tubercles. A plausible supposition is that the micro-organisms or their spores were floating in the air and were deposited in the pots in which the plants grew.

"6. As a rule, the greater the abundance of root tubercles in these experiments, the larger and more vigorous were the plants and the greater was the gain of nitrogen from the air.

"7. In a number of these experiments, as in similar ones previously reported, there was a loss of nitrogen instead of gain. The loss occurred where there were no root tubercles; it was especially large with oat plants, and largest where they had the most nitrogen at their disposal in the form of nitrates. As the gain of nitrogen by the legumes helps explain why they act as renovating crops, the loss in the case of the oats suggests a possible reason why they should appear to be an exhaustive crop.

"Practical inferences.—The ability of legumes to gather nitrogen from the air helps to explain the usefulness of clover, alfalfa, pease, beans, vetches and cow-pease as renovating crops and enforces the importance of these crops to restore fertility to exhausted soils. The judicious use of mineral fertilizers (containing phosphoric acid, potash and lime) will enable the farmer to grow crops of legumes which, after being fed to his stock, will, with proper care to collect and preserve all manure, both liquid and solid, enable him to return a complete fertilizer in the shape of a barnyard manure to his land. A further advantage of growing these crops is that the nitrogenous material, protein, which they contain in such great abundance, is especially valuable for fodder."

From the foregoing it seems that, in the present condition of our knowledge, the conclusion may fairly be drawn that the atmosphere stands ready to furnish the farmer gratis with all the organic constituents which his crops require, provided always that he, on his part, will exercise a sufficient amount of skill and intelligence in appropriating and retaining on his farm the fertilizing materials, and especially the nitrogen. If he does this, all that it is necessary for him to provide, in order to replace the losses which his farm sustains from the sale of stock or produce, are the inorganic or mineral constituents of these, and especially the phosphoric acid and potash. There is much in all this to remind one of Sprengel and Liebig's teaching of fifty years ago, according to which a plant cannot thrive if its soil does not contain all the substances which are to be found in its ash. As regards the cheapest forms in which these inorganic constituents can be applied to crops, there is no doubt that these are high grade superphosphate or Thomas phosphate powder for the available phosphoric acid, and kainite for the potash. There does not appear to be any reason why these substances should not be introduced into the stable manure in the same manner as in the case of the ground plaster above mentioned. Some of the salts contained in the superphosphate and kainite would be useful with the sulphate of lime in fixing the ammonia, as soon as formed from the organic nitrogen. Should this suggestion be found to have practical value, there is no doubt that our fertilizer manufacturers would be found able to supply our farmers, at a very moderate cost, with a mixture of ground plaster, superphosphate and kainite, in such proportions as experience might show to be most advantageous.

I have the honour to be, Sir,
Your obedient servant,
THOMAS MACFARLANE,
Chief Analyst.

10th March, 1891.

BULLETIN No. 23—SWEET SPIRITS OF NITRE AND DILUTED PRUSSIC ACID.

E. MIALL, Esq.,
Commissioner of Inland Revenue.

SIR,—In the following tables you will find a statement of the results which have been obtained by Mr. Franklin T. Harrison, official analyst for the District of Windsor, in the examination of certain samples of Spirit of Nitrous Ether and Diluted Hydrocy anic Acid which were submitted to him for examination. These results are on the whole confirmed by the reports of Dr. J. Baker Edwards, official analyst at Montreal, who examined the same samples. The tables also gives the names of the parties from whom the samples were purchased, and those of the wholesale houses supplying the goods according to the statement of the vendor. From the particulars given it would appear that these drugs are sometimes sold in a deteriorated condition, and that some of the samples may be described as adulterated within the meaning of the Act respecting the Adulteration of Food, Drugs and Agricultural Fertilisers. The whole of the samples referred to were collected in Montreal, but it is quite likely that about the same state of affairs exists in other cities of the Dominion. I enclose herewith Mr. Harrison's report on this investigation, and have to recommend that it, as well as the table, be published.

I have the honour to be, Sir,
Your obedient servant,
THOMAS MACFARLANE,
Chief Analyst.

15th May, 1891.

Date of Collection.	No. of Sample.	Nature of Sample.	Quantity Purchased.	Cost.	Name and Address of Vendor.	Name of Furnisher as given by Vendor.	ANALYSIS.			Analyst.	Remarks.
							Specific Gravity	Yield of Nitric Oxide Gas.	Acidity.		
1890.			Pints.	$ cts.	*Montreal.*						
Dec. 18	9312	Spirit of nitrous ether (*Spiritus ætheris nitrosi*).	1½	1 88	Wallace Dawson, 169 St. Lawrence street	Kerry, Watson & Co., Montreal.	·8434 ·8436	7·08	Excess of acid.	F. T. Harrison..	Good, containing full amount of nitrous ether.
do 18	9315	do ..	1½	1 50	T. J. Lyons, 1 Bleury street.	Lyman Sons & Co., Montreal.	·8580 ·8583	2·2	do ..	do ..	Very deficient in strength of nitrous ether.
do 18	9316	do ..	1½	0 90	Laviollette & Nelson, 1605 Notre Dame street.	Evans Sons, Montreal.	·8398 ·8397	5·72	do ..	do ..	Good, and up to requirements of the B.P., except that it contains excess of acid.
do 18	9317	do ..	1½	1 28	A. Robert, 9 St. Lawrence street.	Kerry, Watson & Co., Montreal.	·8498 ·8501	0·4	....	do ..	Practically worthless, being almost entirely devoid of nitrous ether.
do 19	9320	do ..	1½	0 90	H. R. Gray, 122 St. Lawrence street.	do ..	·8485 ·8485	2·42	Excess of acid.	do ..	Deficient in strength of nitrous ether.
do 22	9322	do ..	1½	0 90	Chas. E. Scarff, 2262 St. Catherine street	Not known........	·8822 ·8823	1·15	do ..	do ..	Very deficient in strength of nitrous ether, also of alcohol.
do 22	9323	do ..	1½	1 00	W. A. Dyer & Co., Phillips' Square.	do	·8437 ·8435	5·68	do ..	do ..	Good, but contains excess of acid.
do 23	9326	do ..	1½	1 20	John Lewis, 38 Victoria Square.	Lyman Sons & Co., Montreal.	·8556 ·8563	2·42	do ..	do ..	Deficient in strength of nitrous ether; excess of free acid.
do 23	9329	do ..	1½	1 50	Kenneth Campbell & Co., St. James st.	Imported.........	·9295 ·9296	.....	....	do ..	Entirely devoid of nitrous ether, and is diluted with water.

Date of Collection.	No. of Sample.	Nature of Sample.	Quantity Purchased.	Cost.	Name and Address of Vendor.	Name of Furnisher as given by Vendor.	Analysis.			Analyst.	Remarks.
							Specific Gravity.	% Hydrocyanic Acid.			
								No. 1 Bottle	No. 2 Bottle.		
1890.			ozs.	$ cts.	*Montreal.*						
Dec. 18	9313	Diluted hydrocyanic acid (*Acidum hydrocyanicum dilutum*).	6	1 20	T. J. Lyons, 1 Bleury street.	Kerry, Watson & Co., Montreal.	·9941 ·9937	4·34	4·44	F. T. Harrison..	Pure; no sulphuric or other foreign acids.
do 18	9314	do ..	5	1 00	do ..	do ..	·9971 ·9971	1·44	1·50	do ..	Deficient in strength; no sulphuric or other foreign acid.
do 18	9318	do :	6	0 90	Laviollette & Nelson, 1605 Notre Dame st.	Evans Sons (Ltd.), Montreal.	·9973 ·9976	·94	·94	do ..	do do
do 19	9319	do ..	6	0 90	A. Robert, 9 St. Lawrence street.	Lyman Sons, Montreal.	·9980 ·9980	1·63	1·67	do ..	do do
do 19	9321	do ..	6	1 50	H. R. Gray, 122 St. Lawrence street.	Kerry, Watson & Co., Montreal.	·9968	2·11	2·11	do ..	Pure, and of full strength.
do 23	9324	do ..	6	0 50	Kerry, Watson & Co., 351 St. Paul street.	Not known; imported B. P.	·9974	1·93	2·17	do ..	Pure; no sulphuric or other foreign acids.
do 23	9325	do .	6	0 60	Lyman Sons & Co., St. Paul street.	Put up by vendor..	·9980	1·67	Empty.	do ..	Deficient in strength.
do 23	9327	do * ..	6	0 50	Kenneth Campbell & Co., Craig street.	Imported.........	1·0000 ·9991	1·24	1·73	do ..	Deficient in strength, and contains hydrochloric acid.
do 23	9328	do .	6	0 50	do ..	Put up by vendor..	·9967 ·9967	2·49	2·49	do .	Does not contain the percentage of H. C. N. stated on the label, as it is labelled "Scheeles Acid;" it also contains hydrochloric acid.

*Labelled "Scheeles Strength," which is equal to 5 p.c. hydrocyanic acid.

OFFICE OF THE PUBLIC ANALYST,
LONDON, ONT., 11th May, 1891.

THOMAS MACFARLANE, Esq., F.R.S.,
Chief Analyst.

SIR,—I have the honour to transmit herewith the report of my work upon samples of Sweet Spirits of Nitre and of Acid Hydrocyanic Dilute, which were analysed by me during the first there months of the present year.

I have examined in all eighteen samples—nine of the spirit and nine of acid.

The following table gives the results obtained :—

Samples.	Genuine.	Below B.P. Strength.	Adulterated	Total.
Spirits of Nitrous Ether........................	3	4	2	9
Acid Hydrocyanic dilute...........	3	4	2	9

As both of these substances are liable to deteriorate on keeping, even if they are originally pure and of full strength, I have placed a separate column for those which came below the B. P. strength, but which may not have been adulterated.

Spirit of Nitrous Ether.

This is a preparation, official in the British Pharmacopœia, and is very extensively used in pharmacy. It consists essentially of a solution in Rectified Spirit of Ethyl Nitrite ($C_2 H_5 No_2$) more or less pure.

Though no doubt it always contains substances of a more or less complex nature, its value, medicinally, depends on the amount of Ethyl Nitrite present.

The tests of the Pharmacopœia consist in detecting the presence, and estimating the amount of Ethyl Nitrite and in detecting the presence or excessive amount of impurities. It states that it should yield, when treated by "Allens test," seven times its volume of Nitric oxide gas, or on being kept some time, not much less than five times its volume, measured at 60° F. and $760^{m\ m}$ pressure.

By this test, 5·3066 times the volume of gas corresponds to 2 per cent. of Ethyl Nitrite, the specific gravity of the sample being ·845; so that a good sample ought to contain not much less than 2 per cent. or more than 2¼ per cent.

Three samples which I examined corresponded to the B. P. test as to the percentage of Ethyl Nitrite, while the others were deficient in strength, one sample being entirely devoid of Ethyl Nitrite.

All the samples effervesced with Bicarbonate of Sodium.

All contained traces of aldehyde, which is nearly always present, but three contained what I considered excessive amounts.

Two samples were adulterated with water. This is a very objectionable addition; not only does it dilute the spirit, but it renders it very liable to deteriorate, and in a short time will become quite worthless. A sample of full strength which I diluted with water until it had a specific gravity of about ·900 was entirely devoid of Ethyl Nitrite in six months, while samples which I prepared according to the B. P. process and kept in glass-stoppered bottles entirely filled were of full strength after keeping one year; but after the bottle was opened, and on using out of it daily, it gradually deteriorated, so that I think it ought to be kept in bottles completely full, and with glass stoppers, and of such size that it will be disposed of in about a fortnight after being opened.

Acid Hydrocyanic Dilute.

Of the nine samples analysed two were labelled " Scheeles Strength."

Two of the samples contained Hydrochloric Acid, and which I returned as adulterated, as the B. P. mentions it as an adulteration, though I do not consider it in any way injurious or detrimental, and as many eminent pharmacists claim, that the addition of a mineral acid will preserve Hydrocyanic Acid the addition was doubtless made for the purpose.

I have the honour to be, Sir,
Your obedient servant,
FRANKLIN T. HARRISON.

BULLETIN No. 24—TEA.

E. Miall, Esq.
Commissioner of Inland Revenue.

Sir,—I return herewith the report addressed to you by Professor Edgar B. Kenrick, official analyst for Manitoba, with reference to a number of samples of tea submitted to him for analysis, and have to recommend its publication in the Bulletin series, together with the tables showing its results. These tables have been slightly enlarged by the addition of particulars regarding the source of the samples examined, but Professor Kenrick's order of arrangement has been retained.

Besides the many valuable results of Professor Kenrick's work, it seems to show that the statement made by Claus, to the effect that inferior varieties of tea contain more theine than the higher grades, is not well founded.

It will be observed that Professor Kenrick, in comparing the yield of the various samples in certain soluble substances, has adopted a method of infusion closely resembling that in ordinary household use. Some interesting conclusions may be drawn from a comparison of these results with those heretofore obtained by other analysts who generally adopt the plan of completely removing all the soluble substances. Geisler is mentioned as having practised the household process in 1884, but there is an instance is early as 1876 recorded by König, who determined the quantity of the substances soluble in water in a saple of black tea according to the " customary domestic method ". He only found 18·22 per cent, a result much below all of Professor Kenrick's averages. Kônig describes this tea as the best sold in Münster, and remarks that the quantity of soluble substances is surprisingly small compared with the results obtained by the methods of the analysts. This last remark is equally applicable to Professor Kenrick's figures. The following table shows the average percentage of soluble substances with tannin removed by complete extraction, according to the analysts named:—

Authority.	Black Tea.			Green Tea.		
	No. of Samples	Total Extract.	Tannin.	No. of Samples	Total Extract.	Tannin.
Hassal	27	33·85	....	13	41·20	......
do	1	33·25	15·24	1	39·06	18·69
Slater	13	30·36	11·15	1	41·48	21·35
Battershall	3*	30·13	13·61	4†	37·95	18·37
Average	....	31·89	13·33	....	39·92	19·47

* Congou. † Young Hyson.

By the domestic method, as applied by Professor Kenrick, the following quantities are removed:—

Teas.	No. of Samples.	Total Extract.	Tannin.
Congou	10	23·37	5·18
Unclassed black	13	23·76	5·40
Average	23	23·56	5 29
Gunpowders	2	28·55	8·00
Young Hysons	5	34·22	10·98
Average	7	31·38	9·49

From these figures it appears that in the ordinary method of using black tea about 73·7 per cent. of its soluble constituents, including only 39·7 per cent of the tannin, is removed, and that in the case of green tea these figures amount to 78·8 and 48·7 per cent respectively.

On the other hand, Professor Kenrick's work shows that by the domestic practice the theine is completely utilised. The quantities he obtained are fully up to those yielded by analysis when methods of complete extraction are used. The following are some of the averages which have been obtained in the latter case:—

AUTHORITY.	PERCENTAGE THEINE.	
	Black Tea.	Green Tea.
Mulder	0·46	0·43
Hassal	2·53	2·79
do	2·08	2·17
Dragendorff	1·86	1·69
Bell	3·24	2·33
Battershall	2·62	1·70
Average, excluding Mulder's	2·47	2·14

Professor Kenrick's results show that for black tea 2·73, and for green 2·47 per cent of theine are removed in the method of preparing the infusion which is adopted.

There is possibly nothing new in the statement that, by the domestic method of using tea, much of the astringent substance is left undissolved in the residue; but I believe that the figures, proving this as well as the complete utilization of the theine, are given for the first time in Professor Kenrick's report.

The amount of adulteration in the samples examined does not exceed at most 6 per cent of their number.

I have the honour to be, Sir,
Your obedient servant,
THOMAS MACFARLANE,
Chief Analyst.

15th June, 1891.

Date of Collection.	Number of Sample.	Nature of Sample.	Quantity Purchased.	Price per lb. Wholesale.	Name and Address of Vendor.	Name and Address of Manufacturer or Furnisher.
1891.		TABLE I.	Lb.	Cts.		
April 20....	10807	Congou tea.....	½	14	G. F. & J. Galt, Winnipeg.	G. F. & J. Galt, Winnipeg.
do 20....	8	do	½	16	do	do ....
do 20....	9	do	½	17⅜	do	do .. .
do 20....	10	do	½	19¾	do	do ....
do 20...	11	do	½	22	do ...	do ....
do 20....	12	do . . .	½	23½	do	do ....
do 20....	13	do	½	24¾	do	do ....
do 20....	14	do	½	28⅛	do	do ....
do 20....	15	do .. .	½	31½	do	do ...
do 20 ...	16	do	½	38½	do	do ....
						Avs. for Congou teas..
		TABLE II.				
April 20....	10819	Assam tea......	½	25	G. F. & J. Galt, Winnipeg.	G. F. & J. Galt, Winnipeg.
Jan. 3....	10206	do	1½	20 (retail.)	E. B. Browne, Sparks street, Ottawa.	Unknown (received on trial.)
do 6....	10210	do	1	60 (retail.)	G. Hollinsworth, Pembroke, Ont.	V. W. Hollinsworth, London, Eng.
		TABLE III.				
April 20....	10817	Ceylon tea... ..	½	27½	G. F. & J. Galt, Winnipeg.	Vendor ... .
do 20...	10818	do	½	29	do	do ....
		TABLE IV.				
Jan. 14....	9490	Unclassed black tea.	1	25 (retail.)	Dykes & Acton, Winnipeg	Thos. B. Green & Co., Hamilton, Ont.
do 14....	9486	do ..	1	25 (retail.)	M. Dufresne, Winnipeg..	Kuhn & Son, Winnipeg..
do 2....	10204	do ..	1½	40 (retail.)	J. Hamlet Allan, Ottawa	Not known........ ....
do 14....	9484	do ..	1	40 (retail.)	F. E. Weldon & Co., Winnipeg.	do ....
do 14....	9482	do ..	1	50 (retail.)	E. Hunter & Co., Winnipeg.	Greening, Hamilton....
do 7....	10216	do ..	1½	50 (retail.)	A. R. G. Peden, Carleton Place, Ont.	Wm. Donahue, Montreal

Serial Number.	Analysis.							Physical Characters.
	Substances Extracted by 10 Minutes' Infusion.			Moisture.	Ash.			
	Total Solids.	Tannin.	Theine.		Soluble.	In-soluble.	Total.	
	p. c.	p. c.	p.c.	p.c.	p.c.	p.c.	p.c.	
1	21·8	4·48	2·76	6·90	3·31	2·57	5·88	Leaves from 16 to 9 mille-metres in width. No complete leaves.
2	23·1	5·01	3·01	5·08	3·47	2·48	5·95	Leaves from 14 to 5 mille-metres in width. A few complete leaves.
3	23·5	4·92	2·70	7·68	3·57	2·21	5·78	Mostly small fragments of leaves from 15 to 6 mille-metres in width. No complete leaves.
4	25·4	6 12	2·61	7·95	3·54	2·34	5·88	Mostly portions of small leaves, averaging about 8 mille-metres in width. A few perfect leaves and numerous minute fragments.
5	25·8	7·41	2·52	7·64	3·51	2·15	5·66	Leaves from 16 to 8 mille-metres in width, mostly about 11 mille-metres and fairly perfect.
6	22·0	4 52	3·00	7·80	3·02	2·28	5·30	Leaves from 15 to 8 mille-metres in width, mostly large fragments of small leaves. A few perfect leaves about 10 mille-metres in width.
7	23·5	5·07	2·45	8·10	3·73	2·22	5·95	Leaves from 14 mille-metres in width downwards; many fairly perfect, averaging about 12 mille-metres in width.
8	22·4	4·39	2·23	8·40	3·66	2·20	5·86	Leaves from 19 to 8 mille-metres in width, mostly fragments of large (15 mille-metres) leaves, divided transversely.
9	23·3	4·29	2·48	8·25	3·93	2·33	6·26	Leaves from 16 mille-metres in width downwards, no particular size predominating.
10	22·9	5·55	2 72	8·21	3·75	1·99	5·74	Leaves averaging about 11 mille-metres in width. A few perfect specimens about 11 mille-metres in width.
....	23·37	5·18	2·65	7·60	3·55	2·28	5·83	
11	24·6	5·04	2·76	8·43	3·76	2·04	5·80	Leaves about 15 or 16 mille-metres in width, mostly in small fragments; large proportion of stalks.
12	29·7	7·12	2·83	4·82	3·53	2·37	5·90	Small-sized fragments, apparently of mostly small leaves.
13	31·3	10·30	3·35	4·00	3·77	2·06	5·83	Coarse appearance; little odour; leaves from 14 to 6 mille-metres in width, and fairly perfect. Fair amount of dust.
Averages.....	28 53	7·49	2·98	5·75	3·69	2·16	5·84	
14	26·9	8·51	2·55	6·83	3·21	1·74	4·95	Leaves from 22 to 8 mille-metres in width; mostly fragments of large leaves, with a large proportion of dust.
15	28·0	7·18	2·80	5·78	3·47	2·01	5·48	Leaves from 16 mille-metres in width. Mainly fragments of medium-sized leaves, less broken up than in last sample. A very large proportion of stalks.
Averages.....	27·45	7·85	2·68	6·31	3·34	1·88	5·22	
16	19·1	3·66	2·45	8·27	3·40	2·73	6·13	Coarse appearance; faint odour; leaves 13 to 7 mille-metres in width, and fairly perfect, some being quite complete. No very large leaves and few small fragments.
17	19·5	3·99	2·23	8·81	2·61	2·75	5·36	Faint odour; leaves from 15 to 5 mille-metres in width. Consists mainly of large tough leaves, with a quantity of minute fragments and dust.
Av. for 25c. tea	19·3	3·83	2·34	8·54	3·01	2·74	5·75	
18	16·6	3·91	1·96	6·12	3·59	2·92	6·51	Very faint odour. Leaves from 20 to 8 mille-metres in width. Mostly large and fairly perfect.
19	25·2	7·09	2·75	6·82	3·12	2·28	5·40	Faint odour; leaves from 20 to 8 mille-metres in width. Mostly large leaves.
Av. for 40c. tea	20·9	5·50	2·36	6·47	3·36	2·60	5·96	
20	23 3	6·15	2·84	6·97	3·60	2·25	5·85	Faint odour; mostly fair-sized fragments of leaves 8 to 10 mille-metres in width. Fair amount of powder.
21	24·7	6·21	2·48	6·22	3·53	2·65	6·18	Leaves averaging 8 mille-metres in width, many being nearly complete. A rather large amount, of dust.

Date of Collection.	Number of Sample.	Nature of Sample.	Quantity Purchased.	Price per lb. Retail.	Name and Address of	
					Vendor.	Manufacturer or Furnisher.
1891.		TABLE IV.	Lb.	Cts.		
Jan. 14....	9492	Unclassed black tea.	1	50	Toronto Tea Co., Winnipeg.	Not known...........
do 14....	9495	do ..	1	50	Hunter & McDonald, Winnipeg.	E. B. Blain, Toronto....
do 2....	10201	do ..	1½	50	F. H. Cluff, Bank st., Ottawa.	Morgan Davis, Toronto.
do 14....	9496	do ..	1	50	Hodges & Co., Winnipeg.	Steel, Hayter & Co., Toronto.
do 7....	10212	do ..	1½	55	S. Keady, Arnprior.....	Rawson, Forbes & Co., Montreal.
do 14....	9489	do ..	1	60	Dykes & Acton, Winnipeg.	Thompson, Codville & Co., Winnipeg.
do 3....	10205	do ..	1½	80	E. B. Browne, Sparks st., Ottawa.	Jas. Maclean, Montreal.
						Average for 13 unclassed black teas.
		TABLE V.				
April 20. .	10820	Japan tea......	½	10 (wholesale.)	G. F. & J. Galt, Winnipeg.	Vendors...............
do 20....	10821	do . . .	½	17⅛ (wholesale.)	do	do ....
do 20....	10822	do	½	18½ (wholesale.)	do	do ....
do 20....	10823	Japan tea.	½	23 (wholesale.)	G. F. & J. Galt, Winnipeg.	Vendors ....
do 20....	10824	do	½	27 (wholesale.)	do	do ....
						Average Table V...
		TABLE VI.				
Jan. 7....	10217	Japan tea.......	1½	20	J. Ducett, Carleton Place	Gilmore, Brockville......
do 7....	10213	do	1½	25	J. F. Whyte, Arnprior..	Not known.............
do 14....	9487	do	1	30	Alex. McMillan, Winnipeg.	Alex. McDonald, Winnipeg.
do 14....	9491	do	1	30	Dykes & Acton, Winnipeg.	Thompson, Codville & Co., Winnipeg.
do 7....	10214	do	1½	30	J. F. Whyte, Arnprior..	Not known.......... . .

	Analysis.							
	Substances Extracted by 10 Minutes' Infusion.				Ash.			
Serial Number.	Total Solids.	Tannin.	Theine.	Moisture.	Soluble.	In-soluble.	Total.	Physical Characters.
	p. c.	p. c.	p.c.	p.c.	p.c.	p.c.	p.c.	
22	26·1	5·20	3·42	6·00	3·84	2·08	5·92	Coarse appearance; faint odour; leaves from 20 to 6 mille-metres in width, mostly of large size and fairly perfect.
23	27·1	5·72	3·27	6.31	3·48	1·82	5.30	Coarse appearance; leaves from 18 to 9 mille-metres in width, and not very perfect; numerous small fragments and much powder.
24	27·4	5·37	2.97	5·61	3·84	2·36	6·20	Faint odour; leaves from 13 to 5 mille-metres in width; Chiefly small fragments of small-sized leaves.
25	30·7	7·43	3·00	6·08	3·50	2·35	5·85	Small fragments of apparently rather small-sized leaves. No leaves complete enough to measure.
Av. for 50c. tea	26·6	6·01	3·00	6·20	3·63	2·25	5·88	
26	24·7	5·54	3·31	5·89	3·64	2·26	5·90	Fine appearance. Leaves from 14 to 6 mille-metres in width, mostly fair-sized fragments of small leaves. A few complete leaves about 7 mille-metres in width.
27	27.9	6·49	3·23	6·03	3·68	2·10	5·78	Strong odour; leaves from 14 mille-metres in width downwards, in fair-sized fragments.
28	16·5	3·47	2·68	5·85	4·06	2·24	6·30	Leaves from 24 to 5 mille-metres in width, averaging about 11 mille-metres. Fairly perfect, some being quite complete. A fair proportion of minute fragments.
....	23·76	5·40	2·82	6·54	3·53	2·37	5·90	
29	26·5	7·48	1·85	3·38	3·54	3·21	6·75	Some very large, loosely-folded, fairly perfect leaves, 20 mille-metres or more in width. The main part very small fragments, a few mille-metres square. Many foreign bodies, such as pieces of wood, charcoal, seeds, &c., &c.
30	31·0	8·81	2.53	3·45	3·48	2·98	6·46	Somewhat similar to last, but better prepared and free from extraneous substances; fragments larger, with a less proportion of minute fragments; some very large, nearly perfect leaves, coarsely folded, and a few complete ones 7 mille-metres in width.
31	32·2	10·14	2·64	3·29	3·58	2·40	5.98	Dark green; leaves from 21 mille-metres in width, averaging about 11 mille-metres, mostly in halves or thirds of the whole leaf. A fair proportion of minute fragments.
32	33·9	11·30	2·78	3·53	3·71	2·77	6·48	Dark olive green. A few large, perfect leaves and halves of leaves 17 to 13 mille-metres in width. Mostly halves and smaller portions of leaves averaging 10 mille-metres in width.
33	32·6	10·89	2·05	3·75	3·39	2·61	6·00	Lighter in colour than two preceding samples. Leaves 16 to 5 mille-metres in width, averaging larger than in last.
....	31·24	9·72	2·37	3·48	3·54	2·79	6·33	
34	26·5	9·29	1·89	5·33	3·67	3·04	6·71	Scarcely perceptible odour; mainly large fragments of loosely-rolled large leaves, with a sprinkling of tightly-rolled leaves. A fair proportion of minute fragments.
35	28·3	7·93	2·21	3·84	3·48	2·59	6·07	Very little odour. Leaves from 14 to 7 mille-metres in width. Mostly irregular fragments of fair-sized leaves, loosely rolled.
36	28·0	8·18	2·41	4·68	3·49	3·16	6·65	Leaves mostly about 12 mille-metres in width, with a large proportion of minute fragments.
37	28·0	8·66	2·46	3·80	3·47	3·56	7·03	Large leaves from 30 mille-metres in width, and minute fragments.
38	28·9	8·83	2·21	5·32	3·61	2·89	6·50	Very little odour. A few fairly perfect leaves, but mostly minute fragments.

Date of Collection.	Number of Sample.	Nature. of Sample.	Quantity Purchased.	Price per lb. Retail.	Name and Address of	
					Vendor.	Manufacturer or Furnisher.
1891.		**Table IV.**	Lb.	Cts.		
Jan. 14....	9492	Unclassed black tea.	1	50	Toronto Tea Co., Winnipeg.	Not known............
do 14....	9495	do ..	1	50	Hunter & McDonald, Winnipeg.	E. B. Blain, Toronto....
do 2....	10201	do ..	1½	50	F. H. Cluff, Bank st., Ottawa.	Morgan Davis, Toronto.
do 14....	9496	do ..	1	50	Hodges & Co., Winnipeg.	Steel, Hayter & Co., Toronto.
do 7....	10212	do ..	1½	55	S. Keady, Arnprior.....	Rawson, Forbes & Co., Montreal.
do 14....	9489	do ..	1	60	Dykes & Acton, Winnipeg.	Thompson, Codville & Co., Winnipeg.
do 3....	10205	do ..	1½	80	E. B. Browne, Sparks st., Ottawa.	Jas. Maclean, Montreal.
						Average for 13 unclassed black teas.
		Table V.				
April 20. .	10820	Japan tea......	½	10 (wholesale.)	G. F. & J. Galt, Winnipeg.	Vendors... ....
do 20....	10821	do . . .	½	17¼ (wholesale.)	do	do ....
do 20....	10822	do	½	18½ (wholesale.)	do	do ....
do 20....	10823	Japan tea.	½	23 (wholesale.)	G. F. & J. Galt, Winnipeg.	Vendors ....
do 20....	10824	do	½	27 (wholesale.)	do	do ....
						Average Table V...
		Table VI.				
Jan. 7....	10217	Japan tea.......	1½	20	J. Ducett, Carleton Place	Gilmore, Brockville......
do 7....	10213	do	1½	25	J. F. Whyte, Arnprior..	Not known..............
do 14....	9487	do	1	30	Alex. McMillan, Winnipeg.	Alex. McDonald, Winnipeg.
do 14....	9491	do	1	30	Dykes & Acton, Winnipeg.	Thompson, Codville & Co., Winnipeg.
do 7....	10214	do	1½	30	J. F. Whyte, Arnprior..	Not known.......... ...

Serial Number.	Analysis.							Physical Characters.
	Substances Extracted by 10 Minutes' Infusion.			Moisture.	Ash.			
	Total Solids.	Tannin.	Theine.		Soluble.	In-soluble.	Total.	
	p. c.	p. c.	p.c.	p.c.	p.c.	p.c.	p.c.	
22	26·1	5·20	3·42	6·00	3·84	2·08	5·92	Coarse appearance; faint odour; leaves from 20 to 6 mille-metres in width, mostly of large size and fairly perfect.
23	27·1	5·72	3·27	6.31	3·48	1·82	5.30	Coarse appearance; leaves from 18 to 9 mille-metres in width, and not very perfect; numerous small fragments and much powder.
24	27·4	5·37	2.97	5·61	3·84	2·36	6·20	Faint odour; leaves from 13 to 5 mille-metres in width; Chiefly small fragments of small-sized leaves.
25	30·7	7·43	3·00	6·08	3·50	2·35	5·85	Small fragments of apparently rather small-sized leaves. No leaves complete enough to measure.
Av. for 50c. tea	26·6	6·01	3·00	6·20	3·63	2·25	5·88	
26	24·7	5·54	3·31	5·89	3·64	2·26	5·90	Fine appearance. Leaves from 14 to 6 mille-metres in width, mostly fair-sized fragments of small leaves. A few complete leaves about 7 mille-metres in width.
27	27.9	6·49	3·23	6·03	3·68	2·10	5·78	Strong odour; leaves from 14 mille-metres in width downwards, in fair-sized fragments.
28	16·5	3·47	2·68	5·85	4·06	2·24	6·30	Leaves from 24 to 5 mille-metres in width, averaging about 11 mille-metres. Fairly perfect, some being quite complete. A fair proportion of minute fragments.
....	23·76	5·40	2·82	6·54	3·53	2·37	5·90	
29	26·5	7·48	1·85	3·38	3·54	3·21	6·75	Some very large, loosely-folded, fairly perfect leaves, 20 mille-metres or more in width. The main part very small fragments, a few mille-metres square. Many foreign bodies, such as pieces of wood, charcoal, seeds, &c., &c.
30	31·0	8·81	2.53	3·45	3·48	2·98	6·46	Somewhat similar to last, but better prepared and free from extraneous substances; fragments larger, with a less proportion of minute fragments; some very large, nearly perfect leaves, coarsely folded, and a few complete ones 7 mille-metres in width.
31	32·2	10·14	2·64	3·29	3·58	2·40	5.98	Dark green; leaves from 21 mille-metres in width, averaging about 11 mille-metres, mostly in halves or thirds of the whole leaf. A fair proportion of minute fragments.
32	33·9	11·30	2·78	3·53	3·71	2·77	6·48	Dark olive green. A few large, perfect leaves and halves of leaves 17 to 13 mille-metres in width. Mostly halves and smaller portions of leaves averaging 10 mille-metres in width.
33	32·6	10·89	2·05	3·75	3·39	2·61	6·00	Lighter in colour than two preceding samples. Leaves 16 to 5 mille-metres in width, averaging larger than in last.
....	31·24	9·72	2·37	3·48	3·54	2·79	6·33	
34	26·5	9·29	1·89	5·33	3·67	3·04	6·71	Scarcely perceptible odour; mainly large fragments of loosely-rolled large leaves, with a sprinkling of tightly-rolled leaves. A fair proportion of minute fragments.
35	28·3	7·93	2·21	3·84	3·48	2·59	6·07	Very little odour. Leaves from 14 to 7 mille-metres in width. Mostly irregular fragments of fair-sized leaves, loosely rolled.
36	28·0	8·18	2·41	4·68	3·49	3·16	6·65	Leaves mostly about 12 mille-metres in width, with a large proportion of minute fragments.
37	28·0	8·66	2·46	3·80	3·47	3·56	7·03	Large leaves from 30 mille-metres in width, and minute fragments.
38	28·9	8·83	2·21	5·32	3·61	2·89	6·50	Very little odour. A few fairly perfect leaves, but mostly minute fragments.

Date of Collection.	Number of Sample.	Nature of Sample.	Quantity Purchased.	Price per lb. Retail.	Name and Address of	
					Vendor.	Manufacturer or Furnisher.
1891.		TABLE VI.	Lb.	Cts.		
Jan. 6....	10208	Japan tea......	1½	30	J. S. Fluker, Pembroke, Ont.	Geo. Childs & Co., Montreal.
do 14....	9481	do	1	30	E. Hunter & Co., Winnipeg.	Morgan Davis, Toronto..
do 7....	10211	do	1½	30	S. Keadey, Arnprior....	Lightbond, Ralston & Co., Montreal.
Jan. 7....	10218	do	1½	35	Geo. Graham, Carleton Place.	Not known..............
do 14....	9494	do	1	35	Hunter & McDonald, Winnipeg.	Greening, Hamilton, Ont.
do 7....	10215	do	1½	35	A. R. G. Peden, Carleton Place.	Kinloch & Lindsay, Montreal.
do 14....	9483	do	1	40	F. E. Weldon & Co., Winnipeg.	Lightbond, Ralston & Co., Montreal.
do 14....	9485	do	1	40	M. Dufresne, Winnipeg..	F. Cloutier, Winnipeg...
do 14.. .	9493	do	1	40	Toronto Tea Company, Winnipeg.	Not known...... ......
do 2....	10203	do	1½	40	J. Hamlet Allan, O'Connor street, Ottawa.	do ....
do 6....	10207	do	1½	40	F. J. Beamish, Pembroke, Ont.	Gilmore, Brockville......
do 6....	10209	do	1½	50	R. Menzies, Pembroke, Ont.	Not known.... ....
do 2....	10202	do	1½	50	F. H. Cluff, Bank street, Ottawa.	Morgan Davis, Toronto..
						Averages for Japans, (Table VI) ....
		TABLE VII.				
Jan. 4....	9488	Gunpowder tea.	1	50	Dykes & Acton, Winnipeg.	Thompson, Codville & Co., Winnipeg.
April 20....	10830	do ..	½	24½ (wholesale.)	G. F. & J. Galt, Winnipeg.	Vendors ....
						Averages, Table VII..
		TABLE VIII.				
do 20....	10825	Young Hyson tea	½	15 (wholesale.)	do ..	Vendors.. ....

Serial Number.	Analysis.							Physical Characters.
	Substances Extracted by 10 Minutes' Infusion.			Moisture.	Ash.			
	Total Solids.	Tannin.	Theine.		Soluble.	Insoluble.	Total.	
	p. c.	p. c.	p.c.	p.c.	p.c.	p.c.	p.c.	
39	29·0	8·55	2·17	3·27	3·50	3·14	6·64	A few large fragments of large-sized leaves, coarsely rolled, but consisting mainly of minute fragments.
40	31·7	8·26	2·84	3·63	3·60	2·58	6·18	Leaves from 26 to 8 mille-metres in width, averaging about 11 mille-metres. Has the appearance of a green tea.
41	33·0	11·25	3·11	3·41	3·77	2·74	6·51	Dark green; leaves from 19 to 6 mille-metres in width. Chiefly fragments of rather large leaves, somewhat coarsely rolled. A fair proportion of minute fragments.
Average for 30c. tea.....	29·8	8·96	2·58	4·02	3·57	3·01	6·58	
42	28·6	8·87	2·11	3·77	3·31	2·72	6·03	Small fragments of large sized leaves; a few fairly complete leaves from 7 to 10 mille-metres in width; a fair proportion of minute fragments.
43	30·7	8·78	2·41	4·45	3·51	2·04	5·55	Dark green; leaves from 17 to 6 millemetres in width; many complete leaves of all sizes and very few fragments. Leaves rolled into long cylindrical forms.
44	33·5	12·87	2·53	3·76	3·78	2·05	5·83	Dark green; leaves from 15 to 8 mille-metres in width, mostly large fragments of fair sized leaves. A few complete leaves.
Av. for 35c. tea	30·9	10·17	2·35	3·99	3·53	2·27	5·80	
45	26·2	8·60	2·08	3·87	3·60	2·46	6·06	Very little odour; leaves mostly about 13 mille-metres in width, and fairly perfect.
46	28·0	8·27	2·32	4·09	3·55	4·38	7·93	Leaves from 20 to 6 mille-metres in width, mostly large and coarsely prepared; large proportion of minute fragments. Foreign substances, such as pieces of bamboo, seeds, &c.
47	30·4	8·96	3·09	4·72	3·55	2·13	5·68	Dark green; leaves fairly rolled. Fragments of all sizes of leaves 20 to 6 mille-metres in width, the portion of large leaves predominating.
48	30·7	10·32	2·75	3·23	3·48	2·90	6·38	Dark green; leaves tightly rolled, and from 13 to 8 mille-metres in width. A few fairly perfect leaves, but mostly small fragments.
49	33·4	8·76	2·30	3·49	3·92	2·43	6·35	Dark green; few complete leaves, from 15 to 8 mille-metres in width. Mostly small fragments; very similar to last.
Av. for 40c. tea	2·97	8·98	2·51	3·88	3·62	2·86	6·48	
50	33·1	12·39	2·53	3·92	3·93	2·05	5·98	Dark green; various sized fragments of leaves averaging about 12 mille-metres in width. Some spherically rolled leaves.
51	33·2	10·09	2·32	3·42	3·93	2·20	6·13	Dark green; leaves mostly from 13 to 10 mille-metres in width, and tightly rolled. A fair proportion of small fragments.
Av. for 50c. tea	33·2	11·24	2·42	3·67	3·93	2·13	6·06	
	30·07	9·38	2·45	4·00	3·62	2·73	6·35	
52	27·9	7·77	2·32	5·75	3·29	4·01	7·30	Mostly fragments of leaves about 15 mille-metres in width, rolled into more or less spherical nodules. Contains a large proportion of nodules with somewhat similar external appearance, but which, on being disintegrated by hot water, are found to consist of small fragments of leaves mixed up with a quantity of dust.
53	29·2	8·22	2·45	3·68	3·43	3·38	6·81	Resembles in external characters the previous sample. Contains more smaller leaves and a lesser proportion of the spurious leaves described above. These latter in this sample contained a few magnetic particles.
	28·55	8·00	2·39	4·72	3·36	3·70	7·06	
54	30·4	9·55	2·07	6·28	3·56	2·12	5·68	Leaves from 18 to 16 mille-metres in width; mainly rather small fragments of fair-sized leaves.

Date of Collection.	Number of Sample.	Nature of Sample.	Quantity Purchased.	Price per lb. Wholesale.	Name and Address of	
					Vendor.	Manufacturer or Furnisher.
1891.		TABLE VIII.	Lb.	Cts.		
April 20...	10826	Young Hyson tea	½	21	do ..	do ....
do 20 ...	10827	do ..	½	24¾	do ..	do ....
do 20....	10828	do ..	½	27¾	do ..	do ....
do 20....	10829	do ..	½	30½	do ..	do ....
						Averages, Table VIII..

Serial Number.	Analysis.							Physical Characters.
	Substances Extracted by 10 minutes infusion.			Moisture.	Ash.			
	Total Solids.	Tannin.	Theine.		Soluble.	Insoluble.	Total.	
	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
55	35·0	11·59	2·49	4·78	3·66	2·01	5·67	Leaves from 18 mille-metres in width and more perfect than in last sample.
56	32·2	11·40	2·50	6·58	4·02	2·28	6·30	A few fragments of large leaves ; chiefly fair-sized fragments of medium-sized leaves.
57	37·0	10·94	2·76	4·32	4·06	2·10	6·16	Fragments of uniformly small size. Mostly of small leaves.
58	36·5	11·40	2·76	5·03	3·87	1·97	5·84	A few large leaves, about 15 mille-metres in width, divided into halves. Very similar to No. 56, but containing more small leaves.
....	34·22	10·98	2·52	5·40	3·83	2·10	5·93	

ST. JOHN'S COLLEGE, WINNIPEG, 22nd May, 1891.

To the Commissioner of Inland Revenue,
Ottawa.

SIR,—I have the honour to present my report on fifty-eight samples of tea upon which I have been working during the past five months.

Though tea is one of those few articles which is seldom adulterated, it is a matter of common knowledge that tea, according to its quality, varies in price between very wide limits. It was desired that if possible a relation might be traced between the chemical composition and the price of a tea.

The following alleged sophistications to which tea is liable are chiefly as follows:—

1. Admixtures with leaves from plants other than the tea plant.

2. The substitution, wholly or in part, of "exhausted" leaves, or leaves which have been already used in making tea, and subsequently dried and rolled up again in imitation of genuine tea.

3. The addition of various mineral substances, such as sand, powdered quartz, magnetic iron, &c., in order to add weight to the tea.

The colouring or "facing" of green tea is by some considered an adulteration, but taken *per se*, it can scarcely be regarded as such, for the colouring matter, being used in small quantities only, can add no appreciable weight to the tea, and, in fact, is said rather to increase the cost of production. No doubt, however, facing is frequently resorted to, in order to disguise the appearance of inferior teas, or in making up various spurious imitations. "An undue proportion of stalks" also is described by one writer as an adulteration, and "lie-tea," to which I shall have occasion to refer later on, can scarcely be regarded in any ther light.

Although there appears to be no doubt at all that tea is, or certainly was at one time, very extensively adulterated by the Chinese, on the other hand there seems to be a difference of opinion as to the extent to which adulteration has been practiced after importation. Thus, while many writers state that at one time there existed manufactories in London for the working-up of exhausted leaves, Dr. Wynter Blyth, in his well-known work on "Foods," says that there is "no evidence that a single hundred weight of tea has been tampered with in England." I shall briefly refer to these various adulterations with reference to the tea samples now under consideration.

Foreign Leaves.—The botanical characters of the tea leaf are so well marked that there is no difficulty in distinguishing it from the leaves of other plants. A careful examination of the leaves of these samples after treatment with hot water failed to disclose the presence of a single suspicious looking leaf.

Exhausted Leaves.—These are not easy to detect. The analyst is usually guided by the amount of total solids extracted by hot water and by the quantity of ash—these being less in the exhausted leaf. The variation in chemical composition between the different varieties of genuine tea are unfortunately so great that consideration of this kind are of little value, except when the proportion of exhausted leaves is comparatively large. In the Departmental circular, G. 126, "Suggestions to Public Analysts" (1884), the minimum limits suggested are 5·75 per cent for total ash, and 3 per cent for soluble ash. An inspection of the accompanying tables will show that 12 samples fall below those limits as regards total ash, while only 1 falls below the limit of 3 per cent for soluble ash. In view of figures obtained from genuine teas by reliable chemists, I cannot help thinking that the limit for total ash in G. 126 is too high. Both Ceylon teas (Table III) give very low results in total ash, but it will be seen that this is owing to the small amount of insoluble ash, the soluble ash in both cases being well above the limit. It will be seen, too, that the Assam teas (Table II), which, in many respects, is similar to the Ceylon teas, give results in total ash low as compared with the amount of soluble ash. Sample No. 17 in Table IV looks very much as if it were adulterated with exhausted leaves.

Mineral Substances.—The addition of such mineral substances as sand, magnetic oxide of iron, &c., would obviously increase the amount of total ash—the addition, for example, of 5 per cent of sand to the tea, meaning an increase of about 5 per cent in the total ash. A comparrison of the ash of the individual samples with either the averages for the whole series, or with averages obtained by other chemists, will show at once that no adulteration of this kind has been practiced. The maximum limit for the total ash of genuine teas is usually placed at 8 per cent. All these samples give results below this limit, the nearest approach to it being in No. 46, Table IV, and the two Gunpowders in Table VII.

I have made no systematic examination for facing. None of the samples were heavily faced, though some of the Japan teas appeared to be slightly coated with colouring matter. The substances used for facing teas are, I believe, of an entirely harmeless nature, and, unless employed to conceal the true character of spurious teas, very little can be said against the practice.

In speaking of the colouring of Japan teas I may here refer to the rather extraordinary, though not uncommon, popular belief that green and Japan tea owe their colour to the presence of copper acquired from copper vessels during the progress of preparation. I have been unable to trace the origin of this belief, and can find no record of analysis in which copper has been detected in tea. The green colour of ordinary green or Japan tea is due simply to chlorophyll—the green colouring matter found in nearly all plants. This green colouring matter is not soluble in water, and so is not dissolved out in the ordinary process of making tea, but if any kind of tea (green or black) be pulverized and shaken up with alcohol a more or less grass-green solution is obtained, in which chlorophyll may very readily be identified by its characteristic absorption spectrum. There is not as much difference as might be expected between the amount of chlorophyll given by a green and black tea, but I have found that the cheap black teas yield less chlorophyll than the better kinds, and I am inclined to think that results of practical value might be obtained by making a simple colorimetic determination of chlorophyll.

Samples Nos. 52 and 53 in Table VII must undoubtedby be looked upon as adulterated. No. 52 was sent to me labellad "Japan tea," but I have no doubt from its appearance, and especially from its resemblance to No. 53, that it is a Gunpowder, and I have accordingly classed it with the latter sample. The analysis of these two samples, it will be seen, resemble each other very closely. The total solids extracted by hot water are (for green teas) rather low, and soluble ash is much below the average. Insoluble ash in these samples is very much above the general average, being only exceeded in one out of the whole 58 samples. This would indicate an undue amount of mineral impurities, but the quantity is not sufficient to render it probable that mineral substances have been added by themselves as an adulteration. The little spherules of agglutinated dust and dirt, made up in clever imitation of the general leaf balls, appear to be the material known to the Chinese as "lie-tea"—a substance described as the sweepings of the warehouses worked up with colouring matter and rice water. In order to ascertain, if possible, if these two samples were representative of the Gunpowder sold in Winnipeg, I examined 10 additional specimens obtained myself from retail dealers in Winnipeg. One only out of the 10 resembled at all the samples whose analysis are given in Table VII. Nearly all of these Gunpowders—including the adulterated sample—were sold at 60 cents per pound. One was sold at 50 cents, and another was very much cheaper. The last mentioned was found to be pure. Even if these spurious teas do not contain injurious substances it is evident that such adulterated samples as the two whose analysis are given are very poor value for the money, if sold at 50 or 60 cents per pound. I have been informed that it is a particular class of Gunpowder (known as Pingscey) that are adulterated in this way. It is satisfactory to find that the majority of Gunpowders sold in Winnipeg do not belong to this class.

It would thus appear that, out of the 58 samples analysed, two, or at most three, are adulterated. I shall now endeavour to show how far a chemical analysis may be depended on in judging of the value of tea.

St. John's College, Winnipeg, 22nd May, 1891.

To the Commissioner of Inland Revenue,
Ottawa.

Sir,—I have the honour to present my report on fifty-eight samples of tea upon which I have been working during the past five months.

Though tea is one of those few articles which is seldom adulterated, it is a matter of common knowledge that tea, according to its quality, varies in price between very wide limits. It was desired that if possible a relation might be traced between the chemical composition and the price of a tea.

The following alleged sophistications to which tea is liable are chiefly as follows:—

1. Admixtures with leaves from plants other than the tea plant.

2. The substitution, wholly or in part, of "exhausted" leaves, or leaves which have been already used in making tea, and subsequently dried and rolled up again in imitation of genuine tea.

3. The addition of various mineral substances, such as sand, powdered quartz, magnetic iron, &c., in order to add weight to the tea.

The colouring or "facing" of green tea is by some considered an adulteration, but taken *per se*, it can scarcely be regarded as such, for the colouring matter, being used in small quantities only, can add no appreciable weight to the tea, and, in fact, is said rather to increase the cost of production. No doubt, however, facing is frequently resorted to, in order to disguise the appearance of inferior teas, or in making up various spurious imitations. "An undue proportion of stalks" also is described by one writer as an adulteration, and "lie-tea," to which I shall have occasion to refer later on, can scarcely be regarded in any ther light.

Although there appears to be no doubt at all that tea is, or certainly was at one time, very extensively adulterated by the Chinese, on the other hand there seems to be a difference of opinion as to the extent to which adulteration has been practiced after importation. Thus, while many writers state that at one time there existed manufactories in London for the working-up of exhausted leaves, Dr. Wynter Blyth, in his well-known work on "Foods," says that there is "no evidence that a single hundred weight of tea has been tampered with in England." I shall briefly refer to these various adulterations with reference to the tea samples now under consideration.

Foreign Leaves.—The botanical characters of the tea leaf are so well marked that there is no difficulty in distinguishing it from the leaves of other plants. A careful examination of the leaves of these samples after treatment with hot water failed to disclose the presence of a single suspicious looking leaf.

Exhausted Leaves.—These are not easy to detect. The analyst is usually guided by the amount of total solids extracted by hot water and by the quantity of ash—these being less in the exhausted leaf. The variation in chemical composition between the different varieties of genuine tea are unfortunately so great that consideration of this kind are of little value, except when the proportion of exhausted leaves is comparatively large. In the Departmental circular, G. 126, "Suggestions to Public Analysts" (1884), the minimum limits suggested are 5·75 per cent for total ash, and 3 per cent for soluble ash. An inspection of the accompanying tables will show that 12 samples fall below those limits as regards total ash, while only 1 falls below the limit of 3 per cent for soluble ash. In view of figures obtained from genuine teas by reliable chemists, I cannot help thinking that the limit for total ash in G. 126 is too high. Both Ceylon teas (Table III) give very low results in total ash, but it will be seen that this is owing to the small amount of insoluble ash, the soluble ash in both cases being well above the limit. It will be seen, too, that the Assam teas (Table II), which, in many respects, is similar to the Ceylon teas, give results in total ash low as compared with the amount of soluble ash. Sample No. 17 in Table IV looks very much as if it were adulterated with exhausted leaves.

Mineral Substances.—The addition of such mineral substances as sand, magnetic oxide of iron, &c., would obviously increase the amount of total ash—the addition, for example, of 5 per cent of sand to the tea, meaning an increase of about 5 per cent in the total ash. A comparrison of the ash of the individual samples with either the averages for the whole series, or with averages obtained by other chemists, will show at once that no adulteration of this kind has been practiced. The maximum limit for the total ash of genuine teas is usually placed at 8 per cent. All these samples give results below this limit, the nearest approach to it being in No. 46, Table IV, and the two Gunpowders in Table VII.

I have made no systematic examination for facing. None of the samples were heavily faced, though some of the Japan teas appeared to be slightly coated with colouring matter. The substances used for facing teas are, I believe, of an entirely harmeless nature, and, unless employed to conceal the true character of spurious teas, very little can be said against the practice.

In speaking of the colouring of Japan teas I may here refer to the rather extraordinary, though not uncommon, popular belief that green and Japan tea owe their colour to the presence of copper acquired from copper vessels during the progress of preparation. I have been unable to trace the origin of this belief, and can find no record of analysis in which copper has been detected in tea. The green colour of ordinary green or Japan tea is due simply to chlorophyll—the green colouring matter found in nearly all plants. This green colouring matter is not soluble in water, and so is not dissolved out in the ordinary process of making tea, but if any kind of tea (green or black) be pulverized and shaken up with alcohol a more or less grass-green solution is obtained, in which chlorophyll may very readily be identified by its characteristic absorption spectrum. There is not as much difference as might be expected between the amount of chlorophyll given by a green and black tea, but I have found that the cheap black teas yield less chlorophyll than the better kinds, and I am inclined to think that results of practical value might be obtained by making a simple colorimetic determination of chlorophyll.

Samples Nos. 52 and 53 in Table VII must undoubtedby be looked upon as adulterated. No. 52 was sent to me labellad "Japan tea," but I have no doubt from its appearance, and especially from its resemblance to No. 53, that it is a Gunpowder, and I have accordingly classed it with the latter sample. The analysis of these two samples, it will be seen, resemble each other very closely. The total solids extracted by hot water are (for green teas) rather low, and soluble ash is much below the average. Insoluble ash in these samples is very much above the general average, being only exceeded in one out of the whole 58 samples. This would indicate an undue amount of mineral impurities, but the quantity is not sufficient to render it probable that mineral substances have been added by themselves as an adulteration. The little spherules of agglutinated dust and dirt, made up in clever imitation of the general leaf balls, appear to be the material known to the Chinese as "lie-tea"—a substance described as the sweepings of the warehouses worked up with colouring matter and rice water. In order to ascertain, if possible, if these two samples were representative of the Gunpowder sold in Winnipeg, I examined 10 additional specimens obtained myself from retail dealers in Winnipeg. One only out of the 10 resembled at all the samples whose analysis are given in Table VII. Nearly all of these Gunpowders—including the adulterated sample—were sold at 60 cents per pound. One was sold at 50 cents, and another was very much cheaper. The last mentioned was found to be pure. Even if these spurious teas do not contain injurious substances it is evident that such adulterated samples as the two whose analysis are given are very poor value for the money, if sold at 50 or 60 cents per pound. I have been informed that it is a particular class of Gunpowder (known as Pingscey) that are adulterated in this way. It is satisfactory to find that the majority of Gunpowders sold in Winnipeg do not belong to this class.

It would thus appear that, out of the 58 samples analysed, two, or at most three, are adulterated. I shall now endeavour to show how far a chemical analysis may be depended on in judging of the value of tea.

The primary causes influencing the value of a tea appear to be chiefly the age of the plant, the age of the leaf, and the time of year at which the leaves are picked. The younger the leaf the more tender and juicy will it be, and the more ready to give up its soluble constituents to hot water. Thus, the more valuble grades of any kind of tea will consist of the younger and smaller leaves. Much will naturally depend upon the care bestowed upon it in its preparation, and no doubt the quality of a tea is much influenced by the nature of the soil, the climate, &c. Furthermore, as is well known, tea looses its "goodness" on keeping, the characteristic aroma and odour gradually passing off. Thus, even if it were possible by the physical characters alone to judge of the value of a tea at a known interval from the date of its preparation, owing to the deterioration which takes place on keeping, it would be impossible by an examination of the leaves alone to form an estimate of their value if the year of their growth were unknown.

In the technical valuation of tea the "tea-taster" pours a measured quantity of boiling water on a weighed amount of the tea sample, and after the lapse of exactly three minutes pour off the infusion from the leaves. The unrolled leaves left in the vessel are carefully examined, and note taken of their size and the extent to which they are broken up or damaged. In forming a judgment on the infusion, both the strength and flavour are taken into account, and the peculiar odour of the unfolded leaves is noticed. It may thus happen that two tea samples, having equally good "drawing" or infusing qualities, may have a very different commercial value, owing to the difference in the physical characters of the leaves. In the process of manufacture the different sized leaves are separated by sifting, and no doubt in this process a quantity of fine fragments and dust is obtained, and this, though possibly having good drawing qualities, would be sold at a cheap rate. Among the samples I have examined there were teas consisting very largely of these small fragments, and as these samples had very little of the characteristic odour of tea it may be that teas consisting of these broken up leaves would deteriorate more rapidly than those made up of tightly tolled, perfect leaves.

In a tea-taster's examinrtion a portion only of the soluble constituents are removed from the leaf. In a chemical analysis the tea is usually boiled for some hours with water, the water is poured off, the leaves boiled up again with fresh water, and this operation is repeated until nothing more will dissolve. The joint extracts are then analysed, the constituents usually determined being theine and tanning, together with the total amount of solid substances extracted by the water.

It will be seen at once that the tea-taster's method of preparing the infusion resembles much more closely the practice of the ordinary tea drinker than does the method of the analyst. The value of the tea to the consumer depends entirely on what is extracted by hot water in the ordinary method of making tea, and not on what is thrown away with the leaves. The tea-taster takes advantage of this in valuating the tea. In view of these facts, and considering that the ordinary chemical method of estimating the whole amount of tannin, theine and soluble solids in the leaf gives very little indication of the value of the tea, I have ventured to depart from the ordinary practice, making my determinations of these ingredients in a solution prepared after the manner of the ordinary household method of making tea. In this process (which was employed by Geisler in 1884 in an extensive series of analyses of teas imported into the United States) 100 parts of boiling water are poured on 1 part of tea, and the infusion poured off at the end of ten minutes. It is probable that ten minutes is much nearer the average time allowed in the household process than is the three minutes in the tea-taster. The proportion of water is perhaps rather larger than that commonly employed in making tea. Slight variations in the proportion of water used do not, however, make any material difference in the results obtained—these, of course, being calculated on the weight of tea taken.

The amount of total solids in the infusion thus obtained is probably compareable to the "strength" of the infusion as noted by the tea-taster; no data are, however, obtained corresponding to the flavour taken into account in a technical valuation. The alkaloid theine, though physiologically speaking the more important ingredient, has a slight bitter taste only, and neither this nor the tannin determines the flavour of the infusion. The flavour is probably due to the volatile oil present in small quantity, and to other substances existing in the tea in still lesser proportion.

In collecting the series of 34 tea samples which I examined during the early part of the year—16 of which were obtained in this city and 18 in the neighbourhood of Ottawa—no destinction was made between the various kinds of black and green teas, all the samples. with the exception of two Indian teas, being sent to me simply as "Black" and "Japan," as the case might be. In forwarding my returns for these samples I said that while there appeared to be a general relation between price and chemical composition, the results would be more intelligible if the teas from one country were compared among themselves, and not with those from other districts. I suggested that if it were desired to have the normal relations between the price and chemical composition, in buying the samples the names of the teas should be obtained from the vendors, and, if possible, the wholesale prices. A fresh series of samples was accordingly procured from the wholesale firm of Messrs. G. F. & J. Galt of this city, the results of which are given in Tables I, III, V and VIII. Before referring in detail to these, I would call attention to the following table of averages, which shows to a certain extent how far a chemical analysis can be relied on in judging the value of a tea of unknown origin.

TABLE IX.

AVERAGE OF TEAS CLASSED ACCORDING TO PRICE.

BLACK TEAS.

Price.	—	Solids.	Tannin.	Theine.	Soluble Ash.	Insoluble Ash.
Cts.						
25	2 samples	19·3	3·83	2·34	3·01	2·74
40	2 do	20·9	5·50	2·36	3·36	2·60
50	6 do	26·6	6·01	3·00	3·63	2·25
55	1 do	(24·7)	(5·54)	(3·31)	3·64	2·26
60	1 do	27·9	6·49	3·23	3·68	2·10
80	1 do	(16·5)	(3·47)	(2·68)	4·06	(2·24)

JAPAN TEAS.

20	1 samples	26·5	(9·29)	1·89	(3·67)	3·04
25	1 do	28·3	7·93	2·21	3·48	(2·59)
30	6 do	29·8	8·96	(2·58)	3·57	3·01
35	3 do	30·9	10·17	2·35	3·53	2·27
40	5 do	(29·7)	(8·98)	(2·51)	3·62	(2·86)
50	2 do	33·2	11·24	2·42	3·93	2·13

It will be seen from this table (Table IX) that, although there may be great irregularities when individual samples are compared, the average for teas of the same price vary regularly in accordance with the commercial value. Thus in both black and Japan teas total solids, tannin, theine and soluble ash increase with the price, while insoluble ash decreases as the price raises. The numbers placed in brackets are exceptions to this rule. The single samples of black tea at respectively 55 and 80 cents, and the 40 cent Japan tea seem totally out of their places. The 80 tea gave the lowest results of the whole series of 58 samples, and I can see no reason at all for its high price. On the whole there appears to be greater regularity in the black teas than in the Japan, the exception in the case of the former being confined to individual samples.

A careful study of Tables IV and VI, and especially a comparison of the chemical data with the notes on the physical characters, will bring out many interesting points. The cheap teas, while giving as a rule low figures in the analysis, are often seen to be made up of small fragments of leaves and possesses very little odour. On the other hand, as in No. 12, Table II, a much broken-up leaf may give a very strong infusion. Undoubtedly in the case of this sample the cheapness (20 cents per pound) is due to the fragmatory nature of the leaves. I have been unable to find out to what extent keeping a tea effects its chemical composition. On the other hand the cheap teas, which from their lack of odour would appear to be old, give weak infusions, while on the other hand the average obtained from the teas of Messrs. Galt, in Table V, are very little higher than those in Table VI, and there can be no question that the former are much newer teas than the latter.

Though I have been unable to predict the drawing qualities of a black tea from its outward appearance, the colous in the case of Japan teas gives some indication of the quality in this respect. These latter teas contain leaves of different shades, varying from dark-olive to a pale green. The dark green leaves appear to give most extract. Though it is not possible to make an exact division, I have divided the teas in Table VI roughly into two classes according to their colour. The darker ones I have distinguished in the table by the word "dark green." It will be seen that those teas thus designated give extract from 30·4 upwards, while those not so distinguished fall below 29 per cent.

Tables I, V and VIII show three series of teas, each table containing teas of one kind only and presenting a gradation in price. These teas were obtained from the wholesale firm of Messrs. G. F. & J. Galt, of Winnipeg. Messrs. Galt were careful to select teas of the same years' growth in order that the results of the analysis might be strictly comparable.

In Table I it will be noticed that up to a certain point there are relations similar to those pointed out with reference to the averages of Tables IV and VI. Thus in the first five numbers of the series there is a tolerably regular increase in the total solids, tannin and soluble ash, and a corresponding decrease in insoluble ash. After this the remaining five samples give irregular results, differing little from the 2nd and 3rd members of the series. The theine is irregular all through the table. In Table V the first four members exhibited a striking regular increase in total solids, tannin, theine and soluble ash, with a falling off of these ingredients in the 5th member. As in Table VI, the darkest coloured tea gave the most extract. The Young Hysons, in Table VIII, give less regular results. As far as they go, the results for Assam and Ceylon teas in Tables II and III show relations of the same nature as those already pointed out.

The practical conclusions I have arrived at are briefly these:—

1. The value of a tea will depend on:—
    - A. Its infusing qualities.
        - (i.) As regards strength.
        - (ii.) As regards flavour.
    - B. The extent to which the leaves are damaged.

2. The strength and flavour of the infusion will be determined by (i) the age, and consequently the size, of the leaf; and (ii) the time the tea has been kept since its manufacture.

3. The infusing qualities may, therefore, to a limited extent be predicted from the size (as indicating the age) of the leaf.

4. A chemical analysis will indicate the strength but not the flavour of the infusion.

5. In cheap and medium priced teas the strength is of more importance than the flavour, and hence a chemical analysis will indicate the value of the tea.

6. In high-priced teas the flavour becomes a more important factor, and, therefore, the valuation of these teas is beyond the reach of a chemical analysis.

TABLE X.—AVERAGES.

—	No. of Samples.	Cents per lb. *Wholesale.	Substances extracted by ten minutes infusion.			Moisture, p.c.	Soluble Ash, p.c.	Insoluble Ash, p.c.	Total Ash, p.c.	Ratio of Total Solids to Tannin.
			Total Solids, p.c.	Tannin, p.c.	Theine, p.c.					
Congou tea	10	*23·5	23·37	5·18	2·65	7·60	3·55	2·28	5·83	4·51
Assam tea	3	.....	28·53	7·49	2·98	5·75	3·69	2·16	5·84	3·81
Ceylon tea	2	*28·3	27·45	7·85	2·68	6·31	3·34	1·88	5·22	3·50
Unclassed black	13	48·	23·76	5·40	2·82	6·54	3·53	2·37	5·90	4·40
Japans (Table V)	5	*19·1	31·24	9·72	2·37	3·48	3·54	2·79	6·33	3·21
Japans (Table VI)	18	35·	30·07	9·38	2·45	4·00	3·62	2·73	6·35	3·20
Gunpowders	2	.....	28·55	8·00	2·39	4·72	3·36	3·70	7·06	3·57
Young Hysons	5	*23·8	34·22	10·98	2·52	5·40	3·83	2·10	5·93	3·12

Table X shows the average obtained for the different kinds of tea examined. The most interesting figures in this table are those contained in the fourth, fifth and sixth columns—representing as they do the ingredients dissolved from the leaves in the ordinary process of making tea. Congous, it will be seen, give a less amount of total solids than greens and Japans, while the Indian and Ceylon teas yield intermediate results. The chief constituent of these total solids is tannin, and the tannin is not directly proportional to the total solids—rising and falling more rapidly than the latter. The last column gives the ratio of the total solids to the tannin. Not only do the Japan and green teas yield more tannin than black teas, but the proportion of tannin to the whole extract is greater than the Japan and green teas. In view of the well known action of tannin on the digestive organs, these facts are of special interest in a country where Japan tea is so largely consumed and where dyspepsia is so prevalent a disease. Another point of interest is the relative amounts of theine obtained from infusions of black and green teas. Theine is an official compound in the British and United States Pharmacopœas, being prescribed as a remedy for sick headache. It would appear from the table that black tea would have an advantage over green when theine is used in the form of strong tea as a domestic remedy for headache.

I have the honour to be, Sir,
Your obedient servant,
EDGAR B. KENNICK.

BULLETIN No. 25.—SUGARS, SYRUPS AND MOLASSES.

E. MIALL, Esq.,
Commissioner of Inland Revenue.

SIR,—From the month of October, 1890, to that of February, 1891, a large number of samples of sugar, syrups and molasses were collected in the Lower Provinces, Quebec and Ontario, and submitted to the district official analyst for examination. Their results will be duly published in the food report for the fiscal year ending 30th June, 1891. From among those samples 100 were selected and subjected to a more minute examination by my assistant, Mr. F. W. Babington, F.I.C. His results, as well as the particulars regarding the source of the samples, are given in the tables appended to this letter, and Mr. Babington's remarks on these as well as his descriptions of the methods employed by him are also sent herewith and recommended for publication.

The descriptions of the samples and the results of their analysis are given in the tables in the following order:—I. White sugars, 21 samples. II. Yellow sugars, 22 samples. III. Syrups, 26 samples. IV. Molasses, 31 samples.

The percentages of cane sugar contained in the white or granulated class vary from 98.84 to 99.8; the average is 99·26. There is no adulteration, and indeed, as has been remarked before now, these sugars are probably among the purest food substances in commerce.

The yellow or brown sugars vary from 86 to 94·9 per cent. of cane sugar; average 90·23. No case of adulteration was detected. It is necessary to remark that the samples may have lost some moisture betwixt the time of their collection and analysis, and that the percentages given may not be exactly true of the samples at the time of their purchase.

The separation of the two groups, syrups and molasses, is not to be regarded as expressive of any essential difference in the two classes of the table. The sub-division has only been made to indicate the names under which they were sold. It would, however, be of advantage, both in trade and technology, if these terms were always used more in accordance with their original signification. If this were done, then it might be possible to restrict the term molasses to the drainings from raw sugar as produced from sugar cane in tropical countries. The word "treacle" was originally used to signify the thicker product which drains from refined sugar in the moulds used in the same localities. It seems now to be almost obsolete in this country, and possibly, even in the tropics, it is being replaced by the word "syrup." It is not unlikely, for instance, that the grade known as "Barbadoes syrup" may be equivalent to what was formerly known as "treacle." "Syrup" in pharmacy means an aqueous solution containing about 66·7 per cent of pure cane sugar, and the word might in commerce be restricted to the high-grade products of the refineries of the consuming country. As now used, however, the term includes products of very variable composition.

If we attempt a reclassification of the syrups and molasses described in the table on the principle that the latter class should never contain less than 40 per cent cane sugar, as indicated by saccharimeter reading, and should always possess the peculiar characteristic odour of molasses or treacle, these samples will be eliminated which have been noted as "genuine" among the molasses and also those among the syrups against which the remark "probably molasses," stands in the tables. Many of these on standing deposit a sediment containing cane sugar, and it is to be remarked that it was found impossible thoroughly to distribute this sediment among the bulk of the sample previous to testing it. The percentages given are therefore to be taken as applying only to the liquid part of the sample of molasses or syrup.

The 35 samples thus separated as genuine are all dark brown in colour, and show the following variations as regards the percentage of constituents found in them:—

Cane sugar, average percentage		42·30 to 54·42
Reducing sugar	do	11·86 to 23·72
Total sugars	do	62·41 to 69·74
Water	do	27·17 to 32·87

It will be observed that the amount of reducing sugar in these samples never exceeds 23·72 per cent, and that the quantity of total sugars in them averages 66·07 per cent.

The following is a list of the samples in the table which cannot be classed under the terms "molasses" or "treacle," as above defined, excluding the three fruit syrups, Nos. 10647, 10635 aud 10636:—

No.	Description.	Average Cane Sugar.	Reducing Sugar.	Total Sugars.	Water.	Colour.
10617	Golden Syrup	32·82	37·92	70·74	25·50	Dark yellow.
10626	do	30·78	42·00	72·78	24·32	do
9943	Syrup	39·25	29·94	69·19	29·30	do
9968	do	38·07	30·72	68·79	28·00	do
9246	Golden Syrup	12·47*	30·33	42·80	28·93	Greenish yellow.
9252	do	35·85	31·10	66·95	26·32	Dark yellow.
9255	do	27·56	27·20	54·76	36·08	do
9269	Syrup	4·47*	53·96	58·43	22·61	Grey paste.
9272	do	12·12*	32·46	44·58	32·59	Dark yellow.
9273	do	46·97	20·70	67·67	27·53	do
9278	do	38·25	23·50	61·75	22·63	Dark brown.
9283	do	43·68	26·44	70·12	26·91	do
9289	do	40·16	22·94	63·10	23·82	do
9291	do	39·74	22·54	62·28	30·95	Dark yellow.
9294	do	38·30	28·18	66·48	27·30	do
10625	Molasses	39·66	29·16	68·82	28·62	Dark brown.
10633	Demerara Molasses	43·90	24·20	68·10	30·00	Dark yellow.
9310	Porto Rico Molasses	39·13	26·64	65·77	30·90	Dark brown.
9271	Molasses	30·30	22·08	62·38	32·01	do

In this list, where the average percentage of cane sugar is marked with an asterisk * the saccharimetric reading has been neglected. In three samples it runs beyond 100 per cent., and these have been condemned as adulterated with starch syrup. In the remaining samples the following variations are shown:—

Cane sugar, average percentage		27·56 to 43·90
Reducing sugar	do	20·70 to 42·00
Total sugar	do	54·76 to 72·78
Water	do	22·63 to 36·08

There is thus a very wide range of variation in the composition of these "syrups," and indeed their average contents of cane sugar is about 11 per cent less than that of the "molasses" above referred to, the former averaging 48·82 and the latter 37·77 per cent. There would seem to be a necessity for establishing a lowest limit for the contents in cane sugar of these syrups, and if it were placed at 30 per cent it would probably not be unjust either to vendor or purchaser. As it is, the cases of adulteration in syrups amount to 3 in 19 or 18·8.

I have the honour to be, Sir,
Your obedient servant,
THOMAS MACFARLANE,
Chief Analyst.

31st July, 1891.

RESULTS of the Examination of 100 Samples

Date of Collection.	Number of Sample	Description of Sample.	Quantity Purchased.	Cost.	Name and Address of — Vendor.	Name and Address of — Manufacturer or Furnisher.
1891.		TABLE I. *White Sugars.*		cts.		
Feb. 9..	10601	American granulated ...	3 lbs.	24	Jas. Scott & Co., Halifax, N.S.	Standard Sugar Refining Co., Boston, Mass., U.S.
do 9..	10607	Granulated, extra ...	"	30	D. J. Leahy & Co., Halifax, N.S.	Moncton Sugar Refining Co.
do 9..	10616	Porto Rico..	"	21	W. H. Snook & Co., Truro, N.S.	Imported... ....
do 9..	10622	Granulated, Standard extra.	"	25	Alex. Cameron, New Glasgow, N.S.	Nova Scotia Sugar Refining Co., Halifax.
....	9959	White......	1 lb.	12	W. B. Belyea, 59 Main St., Woodstock, N.B.	Moncton Sugar Refining Co.
....	9241	Granulated.......... ...	"	8	E. Auger. Champlain Market, Quebec.	do ....
....	9243	Pulverized	"	12	M. Thibaudeau, 31 Sous-le-Fort, Quebec.	Not known........ ....
Oct. 29..	9249	Granulated............	"	8	V. Garneau, 360 St. John St., Quebec.	Moncton Sugar Refining Co.
do 30..	9259	do	"	10	Wm. Lawlor, St. Lawrence St., Lévis, P.Q.	Supplied by A. Joseph, Quebec.
do 30..	9262	do	"	10	E. Bédard, Lévis, P.Q...	Supplied by Whitehead & Turner, Quebec.
do 30..	9265	do	"	8	Beaubien, Lambert & Cie, Lévis, P.Q.	do ....
Nov. 12..	9306	do	"	9	G. D. Lacerte, Somerset, P.Q.	J. Ross, Quebec.........
do 12..	9311	do	"	8	Lavoie & Droviar, Somerset, P.Q.	Whitehead & Turner, Quebec.
Oct. 22..	9229	do	"	8	G. G. Robillard, 458 Dorchester St., Montreal.	St. Lawrence Sugar Refining Co., Montreal.
do 22..	9231	Pulverized	"	10	G. A. Collet, 418 Lagauchetière St., Montreal.	Supplied by Dudon, Herbert & Co., Montreal.
do 22..	9233	Granulated....	"	8	Thos. Cathcart, 231 Craig St., Montreal.	Not known.............
do 23..	9234	Loaf...................	"	9	M. Leduc, 149 Vitré St., Montreal.	St. Lawrence Sugar Refining Co.
Nov. 11..	9277	Granulated............	"	8	F. A. Brodeur, 35 Cascade St., St. Hyacinthe.	Canada Sugar Refining Co.
....	9281	Loaf...................	"	6	N. P. Viens, 70 Cascade St., St. Hyacinthe.	do ....
....	9293	Granulated............	"	9	L. Gutras, Richmond, P.Q.	Lightbound, Ralston & Co., Montreal.
....	9296	do	"	9	John Park, Richmond, P.Q.	Ransome & Forbes......
		TABLE II. *Yellow Sugars.*				
Feb. 9..	10611	Coffee, C........... ...	3 lbs.	21	R. T. Torristal, Halifax, N.S.	Moncton Sugar Refining Co.
do 9..	10612	Demerara........	"	17	W. H. Pallister, Halifax, N.S.	Imported..............
do 9..	10623	Standard, C...........	"	21	James McArthur, New Glasgow, N.S.	Nova Scotia Sugar Refining Co.
do 9..	9937	Yellow...	1 lb.	8	Fred. Goddard, 32 Water St., St. John, N.B.	Moncton Sugar Refining Co.
Oct. 28..	9239	do	"	6	E. Auger, Champlain Market, Quebec.	Whitehead & Turner, Quebec.
do 28..	9240	do	"	7	do	Moncton Sugar Refining Co.

of Sugars, Syrups and Molasses—*Continued.*

Number of Sample.	ANALYSIS.						Remarks.
	CANE SUGAR.				Reducing Sugars by Fehling Solution.	Moisture or Water.	
	By Scheibler's Saccharimeter.	By Clerget's Method.	By Inversion and Fehling Solution.	Average.			
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	
10601	98·84	99·24	98·60	98·90	0·40	....	White.
10607	98·84	99·16	98·32	98·77	0·37	....	do
10616	99·00	98·80	99·37	99·05	0·90	1·00	Amber coloured; crystalized.
10622	98·90	99·26	98·60	98·92	0·37	....	White.
9959	98·90	99·85	99·60	99·45	0·33	....	do
9241	99·60	....	....	....	....	....	do
9243	99·20	....	....	....	....	....	do
9249	99·70	....	....	....	....	....	do
9259	99·70	....	....	....	....	....	do
9262	99·60	....	....	....	....	....	do
9265	99·50	....	....	....	....	....	do
9306	99·70	....	99·30	....	0·50	....	do
9311	99·60	....	99·50	....	0·50	....	do
9229	99·40	....	....	....	....	....	do
9231	99·70	....	....	....	....	....	do
9233	99·70	....	....	....	....	....	do
9234	99·80	....	99·45	....	0·10	....	do
9277	99·60	....	....	....	....	....	do
9281	99·60	100·80	99·80	....	0·14	....	do
9293	99·70	99·50	....	....	0·34	....	do
9296	99·80	....	99·40	....	0·20	....	do
10611	89·40	99·15	91·00	90·18	3·01	1·75	Yellow.
10612	93·40	93·17	93·90	93·50	2·90	1·10	Suspended matter present.
10623	93·00	93·90	94·00	93·63	2·10	1·50	Yellow.
9937	89·60	90·36	90·15	90·03	6·18	2·00	do
9239	88·70	89·00	90·90	88·40	2·77	1·35	do
	88·30	88·00	88·86		3·00	1·25	
9240	93·40	93·40	94·20	93·70	4·78	0·90	do

Results of the Examination of 100 Samples

Date of Collection.	Number of Sample.	Description of Sample.	Quantity Purchased.	Cost.	Name and Address of	
					Vendor.	Manufacturer or Furnisher.
		Table II.				
1891.		*Yellow Sugar.*		cts.		
Oct. 29..	9248	Yellow	1 lb.	7	V. Guneau, 390 St. John St., Quebec.	Langlois & Paradis......
do 29..	6251	do	"	7	G. B. Coté, 322 St. John St., Quebec.	Imported.. ....
do 29..	9260	Yellow sugar......	"	7	Wm. Lawlor, St. Laurence St., Lévis, P.Q.	A. Joseph, Quebec......
do 30..	9264	do	"	6	Beaulien, Lambert & Cie, Lévis, P.Q.	Whitehead & Turner, Quebec.
Nov. 12..	9308	do	"	7	L. E. Thibadeau, Somerset, P.Q.	do ....
Oct. 22.	9228	do	"	6	G. G. Robillard, 458 Dorchester St., Montreal.	St. Lawrence Sugar Refining Co., Montreal.
do 22..	9230	do	"	6	G. A. Collet, 418 Lagauchitière St., Montreal.	Canada Sugar Refining Co., Montreal.
....	9232	do	"	6	Thos. Cathcart, 231 Craig St., Montreal.	Not known..............
Oct. 23..	9235	do	"	6	W. Loduc, 140 Nitre St., Montreal.	St. Lawrence Sugar Refining Co., Montreal.
....	9236	do	"	6	Hamel & Theriault, 35 St. Dominique St., Montreal.	Canada Sugar Refining Co., Montreal.
....	9237	do	"	6	do	do ....
Nov. 11..	9280	do	"	6	N. P. Viens, 70 Cascade St., St. Hyacinthe, Q.	St. Lawrence Sugar Refining Co.
....	9290	do	"	7	Geo. Deland, Acton Vale, Q.	....
Nov. 12..	9297	do	"	7	John Park, Richmond, Q.	Ransome & Forbes......
do 12 .	9300	do	"	7	L. Mahew, Arthabaska, Q.	St. Lawrence Refining Co.
Nov. 12..	9303	Yellow Sugar	"	7	G. O. Bourbeau, Arthabaska, P.Q.	Not. known ....
		Table III.				
		Syrups.				
Jan. 10..	10647	Raspberry	3 lbs.	40	R. Urquhart & Son, Halifax, N.S.	J. Croskill & Son, Halifax.
do 10..	10617	Golden	"	35	E. E. McNutt, Truro, N. S.	Canada Sugar Refining Co.
do 10..	10626	do	"	40	Angus Chisholm, New Glasgow, N.S.	do ....
do 10..	10635	Lime fruit	"	35	Hogg, Cragg & Co., Pictou, N.S.	Simson Bros. & Co., Halifax, N.S.
do 10..	10636	Strawberry.............	2½ lbs.	30	J. N. McDonald, Pictou, N.S.	Ganong Bros., St. Stephens, N.B.
Feb. 3..	9943	Syrup, S. H..	3 pts.	45	Jardine & Co., 85 Prince William St., St. John, N.B.	H. B. Jackson & Co., New York.
do 25..	9968	Syrup........... . ..	"	30	Geo. Hatt & Sons, Fredericton, N.B.	Jardine & Co., St. John, N.B.
1890.						
Oct. 19..	9244	do	1½ pts.	9	Letourneau Frères, 108 Richelieu St., Quebec.	J. Ross, Quebec ....
....	9246	Golden	2 pts.	18	V. Guneau, 360 St. John St., Quebec.	A. Joseph, Quebec......

of Sugars, Syrups and Molasses.

Number of Sample.	ANALYSIS.						Remarks.
	CANE SUGAR.				Reducing Sugars by Fehling Solution.	Moisture or Water.	
	By Scheibler's Sacchari-meter.	By Clerget's Method.	By Inversion and Fehling Solution.	Average.			
	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
9248	95·50	94·00	95·40	94·90	2·92	0·50	Yellow.
9251	93·90	94·00	94·60	94·20	5·07	1·00	do
9260	88·50	89·50	88·46	88·80	6·95	1·45	do
9264	87·50	87·60	86·40	87·20	6·97	1·25	do
9308	90·10	91·10	91·40	90·80	5·81	1·50	do
9228	87·90	87·40	88·10	87·80	8·80	1·00	do
9230	87·00	88·40	86·13	87·20	9·02	1·50	do
9232	86·90	85·70	85·60	86·00	8·87	1·30	do
9235	88·60	90·00	89·60	89·40	10·25	1·00	do
9236	88·30	88·20	89·10	88·50	8·02	1·00	do
9237	84·50	83·50	84·86	84·30	8·07	2·00	do
9230	84·60	82 40	85·00	84·00	8·98	1·71	do
9290	87·00	88·00	89·00	88·00	6·06	1·25	do
9297	86·90	86·90	86·27	86·70	8·50	1·75	do
9300	87·10	87·60	87·35	87·30	9·12	1·10	do
9303	87·60	88·60	88·60	88·20	8·64	1 05	do
10647	36·40	39·30	39 07	38·30	15·75	48·37	Clear.
10617	32·40	36·00	30·06	32·82	37·92	25·50	Slight deposit on standing.
10626	29·60	32·00	30·76	30·78	42·00	24·32	do
10635	—15·60	—15·60	1·75	1·75	158·14	42·12	Clear.
10636	— 8·00	—14·20	5·35	5·35	52·68	48·37	do
9943	38·80	40·00	38·95	39·25	29·94	29·30	Dark yellow in colour; no deposit.
9968	37·60	39·00	37·62	38·07	30·72	28·60	do
9244	49·00	52·00	49·16	50·05	16·14	30·95	Deposit; probably molasses.
9246	112·80	10·80	14·14	12·47	30·33	28·93	Greenish yellow in colour; no deposit.

RESULTS of the Examination of 100 Samples

Date of Collection	Number of Sample.	Description of Sample.	Quantity Purchased.	Cost.	Name and Address of	
					Vendor.	Manufacturer or Furnisher.
1891.		TABLE III. *Syrups.*		Cts.		
Oct. 29..	9252	Golden syrup	1 qt.	20	Hardy & Drolet, 260 St. John St., Quebec.	Whitehead & Turner, Quebec.
do 29..	9255	do	“	15	J. O'Donnell, 90 Valier St., Quebec.	Not known. Been in stock a long time.
do 30..	9263	Barbadoes syrup	1½ pt.	13	Beaulieu & Lambert, Levis, P.Q.	N. Turcot, Barbadoes
do 30..	9266	do	“	11	Gilbert Carrier, Commercial St., Levis, P.Q.	E. Couture, Levis
Nov. 12 .	9305	do	1 qt.	13	G. D. Lacerte, Somerset, P.Q.	J. Ross, Quebec
do 12..	9307	do	“	12	L. E. Thibadeau, Somerset, P.Q.	Whitehead & Turner, Quebec.
do 4..	9267	Amber syrup	1½ pt.	15	James Donnelly, 429 St. James St., Montreal.	Not known
....	9269	do	1 qt.	20	J. Swail & Co., 430 St. James St., Montreal.	N. Quintal & Fils, Montreal.
....	9272	Golden syrup	“	20	E. Brown, 658 Craig St., Montreal.	A. Adams, Montreal
....	9273	do	“	20	W.P. Laverty, 118 Bleury St., Montreal.	Canada Sugar Refining Co., Montreal.
....	9278	Syrup	1 qt..	15	F. A. Brodeur, 35 Cascade St., St. Hyacinthe	Canada Sugar Refining Co., Montreal.
....	9283	do	“ ..	15	Pagnuelo Frères, 118 Cascade St., St. Hyacinthe	Not known
Oct. 11..	9289	do	“ ..	15	Geo. Deland, St. Hyacinthe.	L. Chaput & Fils, Montreal.
do 12..	9291	do	“ ..	20	L. Gutras, Richmond, P.Q.	Kinlock, Lindsay & Co., Montreal.
do —..	9294	do	“ ..	15	D. F. Bédard, Richmond, P.Q.	Ransome & Forbes, Montreal.
do —..	9298	Barbadoes syrup	“ ..	13	S. X. Martel, Arthabaska	J. Ross, Quebec.
Nov. 12..	9301	do	“ ..	13	D. O. Bourbeau, Arthabaska.	Hudon & Herbert, Montreal.
1891.		TABLE IV. *Molasses.*				
Jan. 10..	10639	Molasses..	3 lbs..	20	F. Gastonquay, Halifax, N.S.	....
do —..	10625	do	“ ..	15	Angus Chisholm, New Glasgow, N.S.	Imported
do —..	10633	Demerara molasses	“ ..	15	J. A. Stalker & Co., Pictou, N.S.	do
Feb. 15..	9952	Molasses	3 pts..	15	John S. Maloney, Water St., St. Andrews, N.B.	C.H. Clarke, St. Stephen, N.B.
do 20..	9958	Barbadoes molasses	“ ..	25	Ganong & Wilson, Water St., St. Stephen, N.B.	De Coste & Co., Barbadoes, W.I.
do 23..	9963	Molasses	“ ..	15	J. C. Cole & Son, 4 Connell St., Woodstock, N.B.	W. F. Hatheway, St. John, N.B.
do 25..	9970	do	“ ..	20	Wilmot Guion, 7 York St., Fredericton, N.B.	C.M. Bostwick, St. John, N.B.
1890.						
Oct. 29..	9247	Barbadoes molasses	1½ pt.	9	V. Guneau, 360 St. John St., Quebec.	N. Turcot, Barbadoes...

of Sugar, Syrups and Molasses—*Continued.*

Number of Sample.	ANALYSIS.						Remarks.
	CANE SUGAR.				Reducing Sugars by Fehling Solution.	Moisture or Water.	
	By Scheibler's Sacchari-meter.	By Clerget's Method.	By Inversion and Fehling Solution.	Average.			
	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
9252	35·70	36·70	35·15	35·85	31·10	26·32	Very slight deposit; dark yellow.
9255	26·90	28·40	27·40	27·56	27·20	36·80	No deposit; dark yellow.
9263	45·70	47·30	45·70	46·23	19 64	28·97	Slight deposit; probably molasses.
9266	54·00	52·20	51·82	52·67	12·35	30·32	Deposit; molasses or treacle.
9305	47·00	49·20	46·64	47·55	20·32	27·17	Heavy deposit; probably molasses.
9307	52·60	53·50	51·15	52·75	15 75	30·45	do
9267	43·70	43·60	41·13	42·81	23·50	32·20	No deposit; probably molasses.
9269	131·80	07·20	1·75	4·47	53·96	22·61	Paste.
9272	113·20	15·00	9·24	12·12	32·46	32·59	No deposit; dark yellow.
9273	45·90	47·70	47·30	46·97	20·70	27·53	Slight deposit; dark yellow.
9278	37·60	40·30	36·85	38·25	23·50	22·63	No deposit; dark brown.
9283	42·00	45·90	43·15	43·68	26·44	26·91	do
9289	40·30	40·40	39·80	40·16	22·94	23·82	do
9291	40·00	40·60	38·63	39·74	22·54	30·95	No deposit; dark yellow.
9294	36·00	40·00	38·89	38·30	38·18	27·03	do
9298	48·00	50·00	49·06	49·02	15·94	28·62	Slight deposit; probably molasses.
9301	54·40	55·30	52·00	53·90	14·10	31·25	do
10639	50·40	52·70	48·52	50·54	19·20	31·00	Deposit; genuine.
10625	38·00	42·00	39·00	39·66	29·16	28·62	
10633	42·00	46·20	43·50	43·90	24·20	30·00	Very heavy deposit.
9952	49·20	51·00	49·50	49·90	15·45	32·22	Deposit; genuine.
9958	49·20	50 80	47·21	49·07	13·51	32·87	Heavy deposit; genuine.
9963	50·80	52·60	49·40	50·93	14·78	29·75	Deposit; genuine.
9970	49·20	51·40	57·70	50·55	11·86	32·30	No deposit; genuine.
9247	50·40	52·00	48·40	50·14	17·01	32·42	Slight deposit; genuine.

Result of the Examination 100 Samples

Date of Collection.	Number of Sample	Description of Sample.	Quantity Purchased.	Cost.	Name and Address of	
					Vendor.	Manufacturer or Furnisher.
1890.		Table IV. *Molasses.*		Cts.		
Oct. 29..	9250	Molasses	1 qt..	11	G. B. Coté, 322 St. John St., Quebec.	Imported
do 29..	9253	do	" ..	15	Hardy & Drolet, 260 St. John St., Quebec.	N. Turcot
do 29..	9254	do	" ..	15	J. O'Donnell, 90 Valier St., Quebec.	Imported
do 29..	9256	do	" ..	13	Louis Mercier, 53 St. Paul St., Quebec.	Leclair & Letellier, Quebec.
do 29..	9257	Molasses	1 qt.	13	Louis Poulin, 15 Finlay Market Place, Quebec.	Langlois & Paradis
do 30..	9258	do	"	20	W. Lawlor, St. Lawrence St., Lévis, P.Q.	Whitehead & Turner, Quebec.
do 30..	9261	do	1½ pt.	12	E. Bedard, Lévis, P.Q..	do
Nov. 12..	9309	Barbadoes molasses.	1 qt.	13	Savoie & Droviar, Somerset, P.Q.	do
	9310	Porto Rico molasses	"	10	do	N. Rioux, Quebec
Nov. 4..	9268	Molasses	"	16	James Donelly, 429 St. James St., Montreal.	Not known
do 4..	9270	do	"	15	J. Swail & Co., 430 St. James St., Montreal.	N. Quintal & fils, Montreal.
do 5..	9271	do	"	15	E. Brown, 658 Craig St., Montreal.	A. Adams, Montreal
do 5..	9274	do	"	13	M. P. Laverty, 118 Bleury St., Montreal.	L. Chaput & fils
do 5..	9275	do	"	15	W. G. Rafferty, 187 St. George St., Montreal.	do
do 5..	9276	do	"	15	E. C. Legault, 674 Dorchester St., Montreal.	do
do 11..	9279	do	"	13	F. A. Brodeur, 35 Cascade St., St. Hyacinthe.	Pagnuelo Frères, St. Hyacinthe.
do 11..	9282	do	"	13	Pagnuelo Frères, 118 Cascade St., St. Hyacinthe.	Not known
do 11..	9287	do	"	13	H. Blanchet, Actonvale..	L. Chaput & fils, Montreal.
do 11..	9288	do	"	12	H. Dubrule, Actonvale..	Gaucher & Telmorse, Montreal.
do 12..	9292	do	"	13	L. Gutras, Richmond...	Kinloch, Lindsay & Co., Montreal.
do 12..	9295	do	"	15	D. F. Bédard, Richmond.	Ward, Carter & Co., Montreal.
do 12..	9299	do	"	13	L. Maheu, Arthabaska..	Not known
do 12..	9304	do	"	13	G. O. Borbeau, Arthabaska.	do

of Sugars, Syrups and Molasses.

Number of Sample.	ANALYSIS.						Remarks.
	CANE SUGAR.				Reducing Sugar by Fehling Solution.	Moisture or Water.	
	By Scheibler's Sacchari-meter.	By Clerget's Method.	By Inversion and Fehling Solution.	Average.			
	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
9250	50·80	50·80	49·50	50·36	14·29	31·16	No deposit; genuine.
9253	55·00	53·30	52·14	53·48	12·70	30·26	Heavy deposit; genuine.
9254	48·70	48·30	47·40	48·13	20·42	30·36	No deposit; genuine.
9256	52·20	50·90	49·33	50·81	5·36	29·48	Deposit; genuine.
9257	54·20	53·30	53·00	53·50	12·64	30·98	Deposit; genuine.
9258	44·40	44·60	42·50	43·83	22·26	28·65	No deposit; genuine
9261	48·60	48·50	47·30	48·13	18·86	28·46	Heavy deposit; genuine.
9309	46·40	50·10	45·73	47·41	20·70	29·06	do
9310	39·00	41·40	37·00	39·13	26·64	30·90	No deposit.
9268	44·90	46·80	46·52	46·07	20·80	28·13	do genuine.
9270	49·70	49·60	47·80	49·03	16·94	31·07	Slight deposit; genuine.
9271	29·70	30·70	30·49	30·30	32·08	32·01	No deposit.
9274	42·80	42·80	41·29	42·30	23·72	29·14	do genuine.
9275	48·00	47·60	47·39	47·66	18·08	30·18	Slight deposit; genuine.
9276	53·60	53·30	53·00	53·30	14·97	32·17	do
9279	48·40	48·80	48·90	48·70	15·26	30·95	No deposit; genuine
9282	44·80	47·50	45·00	45·77	20·12	30·47	Slight deposit; genuine.
9287	50·40	52·00	50·42	50·94	15·36	31·02	No deposit; genuine
9288	54·40	55·10	53·75	54·42	13·71	31·09	Slight deposit; genuine.
9292	48·80	50·70	45·47	48·32	17·98	28·82	No deposit; genuine
9295	46·80	49·80	45·80	47·46	17·43	31·20	do
9299	47·60	48·70	44·80	47·03	18·76	31·62	do
9304	46·00	48·30	45·60	46·63	20·10	30·75	Slight deposit; genuine.

OTTAWA, 22nd June, 1891.

THOMAS MACFARLANE, Esq., Chief Analyst.

SIR,—I have the honour to submit to you a report of the results of work done on 100 samples of sugars, syrups and molasses during the last few months. These results are contained in tables I to IV, submitted herewith, in which will also be found my remarks regarding each sample. Besides the examination for evidence of adulteration in these samples, a very considerable amount of work was done in order to decide upon rapid and fairly accurate methods of analysis.

With regard to the white granulated sugars, the samples were found to be practically pure, the average being 99·26 per cent of cane and 0·35 per cent. of reducing sugar. The yellow sugars range from 84 to 94 per cent. of cane sugar and average 90·23 per cent, beside 4·73 per cent. reducing sugar. These were also found to be genuine.

The only adulteration detected was in the syrups, three of them, as remarked in the table, being found to be mixed with starch glucose. One sample, No. 9269, contained so much of the latter substance that it became semi-solid on keeping. The other two samples are good imitations of the genuine article, so far as taste and appearance are concerned. It is possible to say that the remaining syrups containing no admixture of starch glucose, the methods of analysis adopted being quite equal to its detection when present in comparatively small quantity. In order to show this, commercial starch syrup was subjected to the same sort of examination as the samples, as was also a mixture of starch syrup, cane sugar and water. The results thus obtained, as well as in the case of genuine golden syrup and the adulterated samples, are given in the following table:—

——	CANE SUGAR.				Reducing Sugar by Fehling Solution.	Water.
	By Scheibler's Saccharimeter.	By Clerget's Method.	By Inversion and Fehling Solution.	Average.		
	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.
Genuine Golden Syrup..	38·80	40·00	38·95	39·20	29·94	29·30
Golden Syrup No. 9246	112·80	10·80	14·14	....	30·33	28·93
do 9272..........	113·20	15·00	9·24	....	32·47	32·59
do 9269..........	131·80	7·20	1·75	....	53·96	22·61
Commercial Starch Syrup.......	153·80	...	....	....	45·01	23·12
A mixture of ⅓ starch syrup, ⅓ cane sugar and ⅓ water........	43·10	34·30	34·60	34·60	16·13	39·75

The mixture last mentioned was made in the proportions least calculated to arouse suspicion of adulteration, and on the direct saccharimeter reading would probably pass unchallenged. But the facts that the latter changed in amount and continued to diminish until constant, and that the inverted reading was plus and not minus (which latter would have been the case with cane sugar products), are sufficient to show that the sample contains starch syrup. Such fraudulent mixtures would probably contain a much larger proportion of starch syrup than the one experimented on, and weaker mixtures very soon undergo decomposition. It must always be remembered that the analysis of syrups and molasses is never so accurate as that of sugars, because the former contains other substances which affect the results yielded both by the optical and chemical tests.

In order that the value of the results recorded in the tables may be rightly appreciated, I think it is wise to describe, as briefly as possible, the processes used in obtaining them.

The reagents, &c., employed were the following:—1. Animal charcoal in fine powder after 12 hours' digestion in dilute hydrochloric acid, washing and reignition; 2. Alumina cream, prepared by precipitating a solution of alum with ammonia, washing thoroughly, and allowing the precipitate to consolidate to a magma; 3. Fehling solution, which consisted of a mixture of solutions A and B in equal volumes; A contained 34·639 grammes of pure copper sulphate dissolved in water, filtered and made up to 500 cubic centimetres; B contains 173 grammes Rochelle salt dissolved in 300 c. c. water, with 40 grammes sodium hydrate added, dissolved and made up to 500 c.c., and then filtered through glass wool or abestos fibre; 4. A nearly saturated solution of carbonate of soda; 5. The asbestos filters used for obtaining and weighing the cuprous oxide were constructed in the following manner: A "Macfarlane milk tube" is used for containing the filtering materials. Such tubes are made specially for this laboratory, but may be made from a 50 c.c. pipette with long bulb, by cutting the latter across in the middle, and leaving enough of the small tubes at the other ends to pass through a perforated cork. A piece of platinum gauze or perforated platinum foil is placed at the bottom of the wide part of the tube, sufficiently large to prevent the asbestos from being drawn through, and the tube is inserted in the perforation of a rubber stopper, closing a Bunsen filtering flask, which is connected with an exhausting apparatus. The latter is put in operation, and a loose layer of common abestos fibre (crysotile), about an inch deep, placed upon the platinum gauze. A thin pulp made of Italian or hornblendic asbestos is then poured into the tube in sufficient quantity to form a filtering bed. This pulp is made by scraping down a piece of hornblendic asbestos in the direction of the fibre, digesting it for one hour with 4 per cent soda solution, and washing thoroughly. Sufficient pulp must be poured into the tube to form a layer ⅛ to ¼ of an inch in thickness. The filter is then washed once with alcohol and once with ether, dried thoroughly in the water bath, cooled in the dessicator and weighed.

With regard to the details of the processes used, the following may be mentioned:—

Saccharimeter Readings.—The saccharimeter employed is manufactured by Schmidt and Haensch, Berlin, and is known as the Soleil-Ventzke-Scheibler apparatus, the reading giving the percentage of cane sugar direct. 13·024 grammes of the sugar are taken and dissolved and washed, by means of 50 or 60 c.c. warm water, into a flask of 100 c.c. capacity; 1 gramme animal charcoal is added, and agitated occasionally for half an hour; then 20 to 30 c.c. alumina cream is introduced into the flask, mixed with its contents, cooled and made up to the 100 c.c. mark. The solution is then filtered through a dry ribbed filter into a dry flask, introduced into the 200 millimetre tube, and read in the saccharimeter. The reading × 2 gives the percentage. Syrups and molasses are treated in the same way as the sugars, but sometimes require more animal charcoal or have to be read in the 110 m. m. tube.

Clerget Inversion.—50 c.c. of the same solution prepared for the saccharimeter reading are placed in a 50 c.c. flask provided with a mark at 55 c.c.; 2·5 c.c. of strong hydrochloric acid are added and mixed with the solution. The flask is then immersed in water, the temperature of the latter raised to 70° C. and kept between 60° and 70° for 20 minutes. The flask is then cooled to room temperature, made up to 55 c.c., and the solution placed in a 200 m.m. tube fitted with a thermometer and observed in the saccharimeter. The temperature of the solution can also be determined in the ordinary tube immediately after its removal from the saccharimeter. The reading should be (unless in the case of samples containing dextrose or starch syrup) to the left (or—), and its amount, which in the case of sugars varies from —13 to —14 at 20° C., should be increased one-tenth, on account of the dilution. The Clerget formula is then appled, viz.:—

$$\frac{(\text{Direct reading} + \text{invert reading}) \times 200}{142\cdot 7 - \frac{1}{2}\text{ temp. of invert.}} = \text{percentage of cane sugar.}$$

Reducing Sugars.—In the case of samples of white or yellow sugar, 2½ grammes are taken, dissolved and washed into a 50 c.c. flask by the use of about 25 c.c. warm water. 50 c.c. of undiluted Fehling solution are placed in a small beaker, and the latter, as well as the 50 c.c. flask, are immersed in boiling water, and allowed to remain until their contents have about the same temperature as the surrounding water. The sugar solution is then poured into the beaker, and the flask washed out with hot water, not more than about 25 c.c. being used, so that the resulting mixture may not exceed 100 c.c. in bulk. The beaker is allowed to remain in the boiling water for 10 minutes longer, and then the solution containing the precipitated cuprous oxide is poured into the weighed asbestos filter, standing in connection with the exhausting apparatus. If the filter has been properly made the filtration proceeds as rapidly as the liquid can be poured in, and the precipitate can be very rapidly washed into it with hot water. The filter is then filled up three or four times with hot water, and, when the filtrate gives no alkaline reaction with litmus paper, the tube is filled up once with alcohol and a second time with ether. While this is going on, it is convenient to proceed with the precipitation of another assay, which has been previously heated up in the boiling water. After the washing with ether, the tube is heated in a steam bath, to complete dryness, is cooled in the dessicator, and weighed. The increase in weight of the tube multiplied by 0·4861 and 40 gives the percentage of reducing sugars.

Cane Sugar by Inversion and Fehling's Solution.—In testing white and yellow sugars, 0·25 gramme is washed into a 50 c.c. flask by using 25 to 30 c.c. of warm water; 0·5 c.c. of strong hydrochloric acid is added and the mixture inverted by heating, as in the Clerget inversion process. It is then neutralised by solution of soda carbonate, the quantity necessary having been previously ascertained in a blank experiment. Excess of the soda carbonate must be avoided, as it interferes with the correctness of the result. The precipitation, filtration and washing are conducted as described above, under reducing sugars, but 66 c.c. of Fehling solution are used instead of 50, and the bulk of the mixture made up to 110 instead of 100 c.c.m. The increase of weight which the tube experiences, × 0·4861, × 400 gives the percentage of invert sugar resulting from the cane sugar. This, minus the percentage of reducing sugar × 0·95, gives the percentage of cane sugar.

With syrups and molasses 5 grammes of the sample are washed into a 250 c.c. flask and made up to mark; 25 c.c. are used for the reducing sugars, and the same quantity is inverted for the cane sugar. Precipitation, filtration and washing are conducted in the same way as in the case of the yellow and white sugars, excepting that 60 c.c. Fehling's solution are used in determining the reducing sugars and 70 to 80 c.c. of the Fehling when the cane sugar is to be estimated, and that, further, 2 c.c. of the strong hydrochloric acid are used for the inversion, and a corresponding quantity of soda carbonate for neutralising it.

Moisture and Water.—The moisture in the white and yellow sugars was determined by drying 2 grammes to constant weight. In the case of the syrups and molasses, the quantity of water was ascertained by dissolving 20 grammes in warm water, and diluting to 100 c.c. of this solution=4 grammes of the sample into ordinary asbestos fibre (crysotile) contained in a milk tube, the tube and contents having been previously dried and weighed. The milk tubes used in this case had an inside diameter of 40 m.m., a depth of 35 m.m., with an opening at the bottom 5 m.m. in diameter, into a small tube 8 m.m. in length. The tube, with contents, is placed in a water-bath and dried at from 90° to 100° C. The drying is complete in 48 hours, and the increased weight of the tube and contents gives the amount of dry substance contained in 4 grammes of the sample.

In addition to the foregoing particulars regarding methods of examination and manipulation, I may state that the constant for the Clerget inversion, 142·7, is taken from the redeterminations by Wohl, given in "Spencer's Handbook for Sugar Manufacturers" (p. 116). The half normal weight for the quantity of sugar was taken because, with the saccharimeter used, accurate readings to the left were not obtainable with the normal weight. It must also be mentioned that the factor, 0·4861, used for calculating the amount of reducing sugars from the cuprous oxide, was ascertained from a number of determinations of the quantity of the oxide yielded by pure cane sugar after inversion. These determinations agreed closely, but it is quite possible that changes in the manipulations by other operators would alter the factor. Basic lead acetate was not used for clarifying in any of the above analyses, in order to avoid the lead error, or the trouble of removing the lead oxide previous to inversion.

Some of the syrup and molasses samples show greater differences than usual between the results obtained by direct and inverted saccharimeter reading. The differences reappeared even when basic lead acetate was employed to clarify, and were probably due to the presence of unusually large amounts of syrup-forming substances different from sugar. All these analyses were done in duplicate, but I do not consider this to be necessary, as the optical and chemical results check each other and are equivalent to a duplicate analysis.

In giving these details regarding the processes used, it is not intended to suggest that these should be substituted for others now in use. But since, in the examination of saccharine substances, many different methods of analysis are in use, the results of which may vary slightly according to the nature of the process and the mode of manipulation, I have thought it necessary to give these particulars, in order that they may be taken into consideration when comparisons are being made with the results above stated and the work of other analysts.

I have the honour to be, sir,
Your obedient servant,
F. W. BABINGTON,
Assistant to the Chief Analyst.

BULLETIN No. 26.—BAKING POWDER MATERIALS.

REPORT ON THE EXAMINATION OF MATERIALS USED IN THE MANUFACTURE OF BAKING POWDER, AND ON THE METHODS USED IN THEIR ANALYSIS; BY A. MCGILL, B.A., B.SC.

On the analysis of Cream of Tartar, and Substitutes for Cream of Tartar.

1. In the course of work continued at intervals during four years upon samples of cream of tartar and substitutes for that article, as found in the Canadian market, I have met with the following substances as components or adulterants;—

Potassium by-tartrate, calcium tartrate, free tartaric acid, calcium sulphate, alum (ammonia alum in most cases), calcium super-phosphate, tri-calcium phosphate, potassium bi-sulphate, starch (including wheat flour.)

Small quantities of sand, and in one case bi-carbonate of soda, have also been found, but as these are evidently unintentional impurities they will not be further referred to.

2. The whole number of samples which I have fully analysed is one hundred and twenty-three (123); but I have made partial analyses of nearly half as many more. Out of this number I have found only one sample, No. 6705 of the Adulteration of Food Branch, I.R.D., to consist of pure bi-tartrate of potassium. Since the samples were taken at the shops of the leading grocers of most of the cities of Canada, it is to be inferred that cream of tartar and bi-tartrate of potassium are not synonymous terms. This is, of course, to be expected, and I shall, in the sequel (see section 13) show to what extent calcium tartrate is found in genuine cream of tartar. I propose, however, to preface these results by notes of work done with the object of ascertaining the trustworthiness of certain processes, and the verification of certain constants employed in interpreting the results of analysis.

3. *Effect of drying bi-tartrate of potassium* at 100° C.

a—Pure crystal were pulverised, pressed between folds of filter paper and weighed. Loss of weight at 100° C—

In 4 hours	0·19 per cent.
In 8 hours	0·30 "

b—Cream of tartar (No. 3230), treated as above, lost at 100° C—

In 3 hours	1·7 per cent.

This sample contained 11·44 per cent of calcium tartrate.

c—Cream of tartar (X)—lost at 100° C—

In 17 hours	1·69 per cent.

This contained 8·84 per cent of calcium tartrate.

d—Cream of tartar (No. 3232), lost at 100° C.

In 3·5 hours	3·1 per cent.

This sample was adulterated with burnt alum (SO_3=16·8 p.c.)

4. *Effect of drying Tartaric Acid* at 100° C. Pure crystals, pulverised and dried between folds of filter paper on heating to 100° C, the wheight lost

In 4 hours was	0·13 per cent.
In 7 "	0·13 "

5. *Calcium tartrate.*—Loss at 100° C. A sample was prepared by precipitating Calcium Chloride with Rochelle Salt, thoroughly washing the precipitate and drying at 65° to 70° Fah.* This lost weight at 100° C.

In 3 hours	2·27 per cent.	(mean)
In 20 "	8·24 "	(mean)
In 17 "	15·86 "	
Dupl	10·92 "	

The combined water in $Ca. C_4 H_4 O_6, 4 H_2 O$ forms 27·7 per cent by weight of the salt.

6. *Calcium Sulphate* (*terra alba*)—A sample was prepared by stirring plaster of paris, added gradually in excess of water; washing and drying in the air at 65° F. to 70° F. for some days.

This gave, on analysis, 45·81 per cent SO_3. Theory requires (for $Ca SO_4, 2 H_2 O$)—46·50 per cent SO_3.

The sample contains, therefore, 98·52 per cent $Ca SO_4, 2 H_2 O$, and 1·48 per cent water. This lost at 100° C.

In 3 hours	7·1 per cent.
In 12 hours	15·45 "
Dupl.	15·50 "
In 30 hours	15·65 "

The chemically combined water in $Ca SO_4, 2 H_2 O$, constitutes 20·92 per cent by weight of the salt.

7. A sample of maize starch which had been kept in a stoppered bottle in the laboratory for over six months, lost, when dried at 100° C, to constant weight, 6·1 per cent.

A sample obtained at a grocery in Ottawa, and packed in pasteboard, lost 7·9 per cent in weight.

---

*Note—This sample of calcium tartrate gave the following results on analysis :—

(*a*) *CaO* by ignition sol. in HCl. and estimation as oxalate,

$$\left.\begin{array}{ll} & =21{\cdot}812 \text{ p. c.} \\ \text{Dupl.} & =21{\cdot}800 \text{ p. c.} \end{array}\right\} =101{\cdot}26 \text{ per cent } Ca\,C_4\,H_4\,O_6,\ 4\,H_2\,O.$$

(*b*) By washing with 10 per cent sol. of $Na._2 CO_3$ etc. (par. 14) gave 21·95 p. c. CaO = 101·9 per cent. $Ca C_4 H_4 O_6, 4 H_2 O$.

(*c*) By ignition, decomposition of resulting $Ca CO_3$ by normal acid in excess and titrating back with Na O H, N 762·7 x 13 = 99·15 per cent $Ca C_4 H_4 O_6, 4 H_2 O$.

A sample separated by dilute hydrochloric acid from acid phosphate of lime, and ascertained to be pure, was dried at 65° to 70° Fah. for three days. On further drying at 100° C; this lost 8·1 per cent. On standing over night in laboratory, the sample took up 7·9 per cent of moisture from the air.

A sample of Edwardsburg corn starch in lumps gave 10·42 per cent. moisture. Two samples separated from cream of tartar (Nos. 8921 and 8922) gave 13·12 and 12·96 per cent. of lost respectively after drying in air at 65° to 70° Fah. for twenty-four hours. On further exposure to air for twelve hours these samples took up about 7 5 and 8 per cent moisture.

A sample of Berger's starch (rice) which had been bottled in the laboratory for over six months, gave 10·67 per cent lost at 100° C.

A sample of potato starch obtained from F. W. Fearman & Co., Hamilton, and labelled "German potato flour," gave a loss of 13·25 per cent.

This dried sample took up 9 3 per cent of moisture from the air over night.

8. Maize starch is less hygroscopic than potato starch. Starch in lumps retains more moisture than the same starch in powder. Air dry maize starch retains about 8 per cent of moisture. Maize starch separated by aqueous solvents (dilute hydrochloric acid), and dried on a filter, cakes into lumps, and in this condition retains about 13 per cent of moisture which may be reduced to about 8 per cent by pulverizing the lumps and further exposing to dry air at 65° to 70° Fah.

BI-CARBONATE OF SODA.

NOTE.—Crystals were pulverized to a moderate degree of fineness in a mortar. Exposed to a temperature of 100° C. the weight lost was as follows :—

In 2 hours .... 0·94 per cent.
In 6 hours.. 2·74 per cent.

With a much more finely powdered sample the loss of weight was very much more marked, and in 17 hours amounted to 35·34 per cent of the weight of the sample.

A complete conversion of the bi-carbonate to mono-carbonate, as in the following equation :—

$2\,H\,Na\,CO_3 = Na_2\,CO_3 + H_2\,O + CO_2$ involves a loss of 36·9 per cent of weight.

NOTE 2.—Bi-carbonate of soda and bi-tartrate of potassium, both chemically pure and dry, were mixed in the proportion $H\,Na\,CO_3 : K\,H\,C_4\,H_4\,O_6$: : 84 ; 188.

For 1 hour.. loss 0·19 per cent.
For 5 hours.. " 0·28 per cent.

A similar mixture of very finely pulverized bi-carbonate of soda, with commercial genuine cream of tartar, containing 8·84 per cent of calcium tartrate, was made, and exposed to 100° C. for 17 hours.

Loss was 11·80 per cent of weight.

Since this mixture contained 30·88 per cent of bi-carbonate of soda, which (see par. 2) would lose $\frac{35 \cdot 3}{100} \times 30 \cdot 88 = 10 \cdot 90$, while the cream of tartar would *per se* lose $\frac{1 \cdot 69}{100} \times 69 \cdot 12 = 1 \cdot 16$ under the conditions of the experiment (par 3, *C.*—Cream of tartar) this loss of 11·80 per cent of weight in the mixture does not necessarily involve any mutual decomposition of the decomponents.

NOTE 3.- A mixture of pure bi-carbonate of soda with pure tartaric acid in the proportion :—

$2\,H\,Na\,CO : H_2\,C_4\,H_4\,O._6$: : 84 : 75.

was heated to 100° C :—

For 1 hour.. loss 1·15 per cent.
For 5 hours.. " 2·16 per cent.

This loss of weight is probably due to the bi-carbonate of soda (par. 37, note 2) chiefly.

9. From this it appears that bi-tartrate of potassium and free tartaric acid are easily dried at 100° C. to constant weight, without decomposition.

The other components of commercial tartar substitutes are all more or less irregularly affected by exposure to 100° C., so that no advantage is gained by drying the sample at 100 C° before analysis. And this is true of genuine commercial tartars as well as of substitutes, since the calcium tartrate, which is always present in small amount, parts with an indefinite amount of water at this temperature.

10. When an alkali tartrate is burnt with access of air, an alkali carbonate is formed equivalent in amount to the tartrate burnt, *i. e.*, each equivalent of tartaric acid produces an equivalent of carbonic acid. By dissolving the carobonate in normal acid in excess, boiling off carbon dioxide, and titrating back with normal alkali the tartaric acid originally present may be ascertained.

Pure crystals of tartaric acid were pulverized and dried between folds of filter paper. Two grams, dissolved in water, required 26·6 cc. normal soda to neutralize (phenol-phthalein as indicator). The solution of sodium tartrate was evaporated to dryness in platinum, and ignited at dull redness over naked flame. The ash was treated in the dish with 32 cc. normal sulphuric acid, and about 100 cc. boiling water. The filtrate after boiling required 5·4 cc. normal soda to neutralize (phenol-phthalein used as indicator).—26·6 × 50 × 0·75 = 99·75 per cent $H_2 C_4 H_4 O_6$.

11. In combination with lime, tartaric acid may also be estimated by converting to carbonate by ignition, since, although the lime carbonate formed may be partially converted into caustic lime by heat in presence of the excess of carbon, yet the lime formed has the same neutralizing power as against the normal acid added.

Calcium tartrate (preparation see par. 5).—From 3·079 grms. ignited, and extracted with water and $H_2SO_4 \overline{N}$—Obtained 760·3 cc. $H_2 SO_4 \overline{N}$ per 100 grammes. From 3·254 grms. treated as described obtained 765·2 cc. $\overline{N}$ per 100 grammes. Mean = 762·7 cc. $\overline{N}$ per 100 grammes. 762·7 × ·13 = 99·15 per cent.

$Ca C_4 H_4 O_6, 4 H_2O$.

12. The following work upon mixtures of bi-tartrate of potassium and calcium tartrate show how closely the proportions of each salt present can be estimated by ascertaining the following:—

(1) The available acidity of the mixture—which is entirely due to the bi-tartrate present.

(2) The total tartaric acid present, by ignition, &c. (as described in sections 10 and 11).

Experiments upon mixtures of tartrates:—

(*a*)—A mixture was made as follows:—

Pure bi-tartrate of potassium	80	parts.
Pure calcium tartrate (par. 5)	20	do
	100	

2·5 grammes required 10·35 KOH, $\overline{N}$ to neutralize (phenol-phtha lein as indicator)—

= 414 cc. $\overline{N}$ per 100 grammes—
= 414 × ·188 = 77·83 $KHC_4H_4O_6$.

The whole was evaporated to dryness and ignited—(details of treatment, see par. 10) required 24·35 cc. $H_2 SO_4 \overline{N}$.

= 974 cc. $\overline{N}$ per 100 grammes
Total tartaric acid — 974 cc. N
$\overline{T}$ as $KHC_4 H_4 O_6$ = 2 × 414 = 828 do

As calcium tartrate = 146
= 146 × ·13 = 18·98 per cent $Ca C_4 H_4 O_6 4 H_2 O$.

The errors which result from this method are therefore, from the above experiment—

For 80 parts $KHC_4 H_4 O_6$ we obtain	77·83
For 20 parts calcium tartrate (?) we obtain	18·98
For 100 parts mixture	96·81

(*b*)—Bi-tartrate of potassium	66·6	parts
Tartrate of calcium	33·4	do
	100·0	

On similar treatment this gave Free acid = 340 cc. $\overline{N}$ per grammes = 340 × · 188 = 63·92 per cent K H $C_4 H_4$ 06.

Total organic acids = 943·3 cc. $\overline{N}$ per 100 grammes.
Deduct 2 × 340 = 680·0 "

263·3 cc. $\overline{N}$ as Calcium Salt = 363·3
× · 13 = 34·23 per cent Ca $C_4 H_4$ O6 4 H_0.

For 66·6 potass. bi-tartrate we find	63·92
For 33·4 calcium tartrate we find	34·23
100·0	98·15

(*c*)—Bi-tartrate of potassium 75 parts.
Calcium tartrate 25 "
100

Thus gave (using 4 grammes)
Acidity = 390 c.c. $\overline{N}$ = 73·32 per cent $K H C_4 H_4 O_6$.
Organic acids = 957·5 c.c. $\overline{N}$ per 100 grammes 2 × 390
= 780 "

177·5 c.c. $\overline{N}$ as Calcium Salt = 177·5 × ·13 = 23·08 $CaC_4 H_4 O6\ 4 H_2 O$; 73·32 × 23·08 = 96·40.

(*d*)—Bi-tartrate potassium 60 parts.
Calcium tartrate 40 "
100

This gave (using 2·5 grammes)
Acidity 318 cc. $\overline{N}$ per 100 grammes = 318 × · 188 = 59·78 $K H C_4 H_4 O6$.
Organic acid = 926 cc. $\overline{N}$
Less 2 × 318 = 636

290 cc. $\overline{N}$ = 37·7 $Ca C_4 H_4 O6,\ 4 H_{10}$ 59·78 + 37·7 = 97·48.

Synopsis—Bi-Tartrate Potassium, Calcium Tartrate.

—	Present.	Found.	Present.	Found.
(*a*)	80	77·8	20	19
(*b*)	66·6	63·9	33·4	34·2
(*c*)	75	73·3	25	23·1
(*d*)	60	59·8	40	37·7
Total	281·8	274·6	118·4	114·0

When we take into account the facts that (1) the components are air dry at about 60° to 70° Fah., (2) the uncertainty as to the exact composition of the calcium tartrate (see section 5), I think that as a ready method of obtaining fairly accurate knowledge of the composition of commercial cream of tartar, this process may safely be recommended to analysts.

In the following section, I give the results of work (using this method) upon 70 samples of genuine tartar, as a contribution to data now accumulating for deciding how high an admixture of tartrate of lime may be permitted in cream of tartar without constituting an adulteration of the same.

13. The percentage of tartrate of lime present in genuine cream of tartar as found in Canada may be seen in the following results of analysis of 70 samples collected during the past four years in Montreal, Toronto, Ottawa, Halifax and other Canadian cities and towns. Where the departmental number of the sample is given details as to time and place of collection may be obtained by reference to the Bil-

letins issued by the Department of Inland Revenue; or from the Reports of Adulteration of Food:—

1 Designation of Sample.	2 cc's Soda $\overline{N}$ per 100 grms. Sample.	3 Calculated as $KH\overline{T}$ = ·188.	4 cc's $H_2SO_4\ \overline{N}$ for ash of 100 grammes.	5 Difference between 2 (×2) and 4.	6 Calculated as $Ca\ T \times 4\ H_2O$ = ·130.	7 Sum of $KH\overline{T}$ and $Ca\ \overline{T}$.
J. R., Almonte	474	89·11	1034	86	11·18	100·3
3230	460	86·48	1008	88	11·44	97·9
W. A. L., Ottawa.	463	87·04	968	42	5·46	92·5
2419	456	85·73	994	82	10·66	96·4
2523	472	88·74	1018	74	9·62	98·4
2931	461	86·67	1006	84	10·92	97·6
3008	470	88·36	1022	82	10·66	99·0
6836	466	87·61	1024	92	11·96	99·6
3315	454	86·45	1002	94	12·22	98·7
3319	458	86·10	982	66	8·58	94·7
5373	452	84·98	998	94	12·22	97·2
5374	452	84·98	1022	118	15·34	100·3
5375	444	83·47	984	96	12·48	96·0
4982	448	84·22	1010	114	14·82	99·0
4985	468	87·98	998	62	8·06	96·0
6149	472	88·74	1028	84	10·92	99·7
6151	444	83·47	966	78	10·74	94·2
6155	470	88·36	1022	82	10·66	99·0
5729	454	85·35	1008	100	13·00	98·4
5734	472	88·74	1008	64	8·32	97·1
2833	462	86·86	1008	84	10·92	97·8
7008	459	86·29	1022	104	13·52	99·8
7009	468	87·98	1024	88	11·44	99·4
X	485	91·18	1038	68	8·84	100·0
6702	468	87·98	1018	82	10·66	98·6
6705	532	100·00	1063	....	....	100 0
6708	474	89·1	1024	76	9·87	98·9
6710	456	85·73	1016	104	13·52	99·3
6712	469	88·17	1023	85	11·05	99·2
6713	475	89·30	1027	77	10·01	99·3
6719	444	83·47	1008	120	15·60	99·1
6721	490	92·12	1036	56	7·28	99·4
8638	462	86·83	1023	99	12·87	99·7
8639	468	87·98	1023	87	11·31	99·3
8640	483	90·80	1031	65	8·45	99·3
8642	473	88·92	1027	81	10·53	99·5
8643	470	88·36	1026	86	11·18	99·5
8644	479	90·05	1031	73	9·49	99·5
8645	465	87·42	1021	91	11·82	99·2
8646	481	90·42	1024	62	8·06	98·5
8651	486	91·37	1034	62	8·06	99·4
8652	480	90·24	1031	71	9·23	99·5
8654	460	86·48	1018	98	12·74	99·2
8655	486	91·36	1034	62	8·06	99·4
8656	462	86·85	1021	97	12·61	99·5
8657	458	86·10	1016	100	13·00	99·1
8659	506	95·12	1043	31	4·03	99·2
8661	462	86·85	1022	98	12·74	99·6
8663	454	85 35	1017	109	14·17	99·5
8664	452	84·97	1016	112	14·56	99·5
8666	522	98·13	1051	7	0·91	99·0
8667	482	90·61	1022	58	7·54	98·2
8668	476	89·49	1032	80	10·40	99·9
8669	468	87·98	1022	86	11·18	99·2
8672	440	82·72	1005	125	16·25	99·0
8894	452	84·97	1016	112	14·56	99·5
8899	509	95·69	1043	25	3·35	99·0
8900	476	89·49	1030	78	10·13	99·6
8901	470	88·36	1022	82	10·66	99·0
8904	468	87·98	1030	94	12·22	100·2
8906	471	88·54	1028	86	11·16	99·7
8908	437	82·15	1004	130	16·90	99·1

1 Designation of Sample.	2 cc's Soda $\overline{N}$ per 100 grms. Sample.	3 Calculated as KH$\overline{T}$ =·188.	4 cc's H_2SO_4 $\overline{N}$ for ash of 100 grms.	5 Difference between 2 (×2) and 4.	6 Calculated at Ca $\overline{T}$+4 H_2O=·130.	7 Sum of KH$\overline{T}$ and Ca $\overline{T}$
8909	456	85·72	1015	103	13·40	99·1
8910	465	87·42	1025	95	12·35	99·8
8914	466	87·60	1026	94	12·22	99·8
8915	479	90·05	1027	69	8·96	99·0
8918	464	87·23	1010	82	10·66	97·9
8920	510	95·88	1043	23	2·99	98·9
8924	467	87·79	1023	89	11·5	99·4
c	484	90·99	1052	84	10·99	101·9
Mean.....	469	88·17	1020	82	10·66	98·8

14. Nearly all samples of cream of tartar give traces of sulphates. I have estimated the sulphuric acid in six samples which were undoubtedly genuine, containing no starch, free tataric acid, phosphates nor alumina. In the following table I have expressed the sulphuric acid found as hydrated sulphate of lime ($CASO_4$, $2H_2O$)—

Designation of Sample.	Acidity in cc's NaO,H$\overline{N}$,	Bi-tartrate of Potassium.	Organic Acids in cc's H_2SO_4 $\overline{N}$	Organic Acids as Neutral Salts.	Expressed as Ca $\overline{T}$+4 H_2O,	$CaSO_4$ +$2H_2O$. —— From SO_3 found.	TOTAL.
8650	483	90·80	1021	55	7·15	1·17	99·12
8653	494	92·87	1024	36	4·68	1·49	99·04
8660	501	94·18	1022	20	2·60	2·31	99·09
8671	517	97·20	1034	....	....	3·54	100·74
8895	522	98·13	1044	....	....	1·06	99·19
8907	520	97·76	1040	....	....	1·21	98·97
Mean.....	506	95·15	1031	19	2·47	1·80	99·36

These are the only samples of undoubtedly genuine cream of tartar in which I have found notable amounts of sulphates. In all other cases where sulphates have been present they have either formed a very high percentage of the substance (over 50 per cent) and have consequently been added with fraudulent intent; or they have been associated with starch, free tartaric acid or other adulterant.

15. From the available acid found by igniting, &c., after neutralization with soda the proportion of bi-tatrate of potassium and tartaric acid present together in admixture may be determined—

A mixture was made of the following composition:—

Pure bi-tartrate of potassium..............................	60 parts.
" tartaric acid..	40 "
	100

Acidity=844 cc $\bar{N}$ per 100 grammes. Total organic acids on evaporation, ignition, &c.=1158 cc. $\bar{N}$ per 100 grammes.
Deduct..................844 "

314 cc. $\bar{N}$ represents the combined tartaric acid in $KHC_4H_4O_6$=314×188=59·03 parts $KHC_4H_4O_6$. Also, 1158—2×by 314=530 cc. $\bar{N}$ measures the free tartaric acid=530×·075= 39·75 parts per 100. 59·03×39·75=98·78.

16. In such a mixture the free tartaric may be washed out by alcohol, and titrated with soda.

In the same mixture (see sec. 15) the tartaric acid was washed out (from 5 grammes) by repeated treatment with absolute alcohol. The washings amounted to about 200 cc. These were diluted with water to about 500 cc., and titrated hot with normal soda.

Required 26·6 cc. $\bar{N}$ = 532 cc. N per 100 grammes of the mixture.= 532 × 075 = 39·9 per cent tartaric acid in the free state.

The bi-tartrate of potassium remaining on the filter was dissolved in boiling water and titrated with soda.

Required 15·3 cc. $\bar{N}$ *i.e.*, 306 cc. $\bar{N}$ per 100 grammes mixture.=306×·188=57·53 per cent $KHC_4H_4O_6$ 57,53 × 39·9 = 97·43.

17. In the same mixture the combined tartaric acid was estimated by direct ignition of the dry substance (using 5 grammes)—the ash being treated with $H_2SO_4\bar{N}$ and hot water—organic acids = 306 cc. $\bar{N}$ per 100 grammes = 306 × ·188 = 57·53 per cent $KHC_4H_4O_6$.

18. In genuine cream of tartar a very neat way of estimating lime is to wash with carbonate of soda solution, which leaves the lime as carbonate.

A sample of commercial cream of tartar containing 91·18 per cent of $KHC_4H_4O_6$, and ascertained free from every other impurity than calcium tartrate, was washed (10 grammes being used) with about 200 cc. of a 10 per cent solution of carbonate of soda.

The washing liquid was used hot, and the resulting carbonate of lime was dried on the filter, ignited and weighed as calcium oxide.

Obtained 2,215 per cent of Ca O, equivalent to 10·28 per cent $CaC_4H_4O_6$, $4H_2O$.

Estimated as in par. 12, this sample gives tartaric acid as calcium tartrate, equivalent to 8·84 per cent $CaC_4H_4O_6$, $4H_2O$.

As compared with the method described in section 12, this process has the disadvantage of being inapplicable in presence of sulphate or phosphate of lime, starch or alum.

19. In the following experiments a sample of ammonia alum was used, which gave 11·38 per cent Al_2O_3. Theory requires 11·36 per cent in accordance with the formula $(NH_4)Al(SO_4)_2 12H_2O$. The burning of alum has for its object the dehydration of the alum. It is impossible, in practice, to effect complete dehydration of ammonia alum without the loss of more or less sulphate of ammonia. Assuming all the sulphuric acid in combination as alumina salt to be available for the neutralization of soda, the formula $(NH_4)_2SO_4$, $Al_2(SO_4)_3$, $24H_20$=907 corresponds to an available acidity measured by $\frac{6000}{907} \times 100 = 661$ cc. $\bar{N}$ per 100 grammes. On complete dehydration the acidity should become $\frac{6000}{475} \times 100 = 1263·1$ cc. $\bar{N}$. On complete loss of sulphate of ammonia the acidity becomes $\frac{6000}{343} \times 100 = 1749·3$ cc. $\bar{N}$ per 100 grammes.

There is great difficulty in ascertaining the end point of the reaction in neutralising alum with soda, and this is particularly the case with ammonia alum, where not only does the precipitated alumina interfere with recognition of the point of neutralization, but the ammonia becomes a troublesome factor when phenolphthalein is used as indicator. Phenol-phthalein is the best indicator, and even with ammonia gives very fair results, provided it is used in sufficiently large amount. (J. H. Long, Am. Chem. Journal, quoted in Analyst, Vol. XV, pp. 38 et seq.) Methyl-orange is not a good indicator for this purpose, the change of colour not being decided enough, and cochineal is precipitated as a lake by the alumina. I have used coralline with some satisfaction, but prefer phenol-phthalein.

The acidity of crystallized ammonia alum (phenol-phthalein as indicator) was 648 cc. $\overline{N}$ per 100 grammes. This is the mean of a large number of estimations, varying among themselves through a range of 16 cc. $\overline{N}$ for 100 grammes alum. On heating ammonia alum in an air bath for some hours to 130° C., the loss of weight amounted to 38·1 per cent. Assuming this loss to be entirely due to dehydration, it corresponds to 80 per cent of the water of crystallization.

The acidity of the sample should then be increased to

$$\frac{100}{62} \times 661 = 1064 \text{ cc. } \overline{N}.$$

Experiment gave 990 cc. $\overline{N}$ per 100 grms.

On heating to a dull red heat for half an hour, ammonia alum lost 52·5 per cent, by weight.

This corresponds to total loss of water and additional loss of (52·5—47·6) = 4·9 per cent of sulphate of ammonia.

On further heating (after pulverising and returning to platinum dish) for half an hour longer, the loss of weight amounted to 61·75 per cent.

This corresponds to total loss of water and all but (62·2—61·8) = 0·4 per cent of the sulphate of ammonia present.

On further heating at a somewhat higher temperature for fifteen minutes the loss of weight amounted to 67 per cent.

This corresponds to total loss of water and sulphate of ammonia as well as of nearly *five* (67 — 62·2) per cent of sulphuric acid in the sulphate of alumina.

The acidity at this stage was 1440 cc. $\overline{N}$ per 100 grammes.

The acidity corresponding to a loss of 67 per cent of weight, the loss being due to total loss of water and ammonium sulphate, and partial loss of SO_3 from sulphate of alumina is

$$\begin{array}{lr} \frac{33}{100} \times 907 = 299{\cdot}3 \text{ made up of } Al_2O_3, & 103{\cdot}0 \\ SO_3, & 196{\cdot}3 \\ \hline & 299{\cdot}3 \\ \hline \end{array}$$

$$100 \text{ grammes} = \frac{196{\cdot}3}{40} \times 1000 \times \frac{100}{299{\cdot}3} = 1639{\cdot}6 \text{ cc. } \overline{N}.$$

On further prolonged ignition for some hours the acidity became 1160 cc. $\overline{N}$ per 100 grammes. This corresponds to loss of sulphuric acid in nearly 34 per cent of the sulphate of alumina. Another portion of the alum was very carefully ignited, and repeatedly weighed at intervals until the loss of weight reached 62·5 per cent. This should correspond to total loss of water and sulphate of ammonia, and an insignificant loss of sulphuric acid in sulphate of alumina. The acidity was 1556 cc. $\overline{N}$ per 100 grammes, instead of about 1740 cc. $\overline{N}$, required by theory.

Synopsis of Results.

Availability, acidity per 100 grammes.	Calculated.	Found.	Difference.
Crystallized ammon. alum	661	648	13
Loss of 38·1 per cent weight	1064	990	74
" 62·5 " "	1740	1556	184
" 67·0 " "	1640	1440	200
On prolonged ignition	—	1160	—

This shows a continually increasing divergence between theory and fact in the assumption that ammonium sulphate volatilizes completely before sulphate of alumina parts with its acid on heating.

In order to ascertain whether sulphate of alumina begins to decompose with loss of SO_3 before the whole of the sulphate of ammonia is volatilized I made the following experiments:—

A sample of ammonia alum was heated in platinum, until it sustained a loss of weight amounting to 48·8 per cent. This corresponds to an excess of $48{\cdot}8 - 47{\cdot}6 = 1{\cdot}2$ per cent loss over and above loss due to complete dehydration. Had this additional loss been entirely due to sulphate ammonia, there should remain in the residue from each 100 parts of alum burnt 37·7 parts sulphate of alumina and 13·5 parts sulphate of ammonia = 51·2 parts by weight.

The acidity of such a residue should be $661 \times \frac{100}{51 \cdot 2} = 1291$ cc. $\overline{N}$ per 100 grammes.

The ascertained acidity was 1192 cc. $\overline{N}$.

The sulphuric acid, ammonia and alumina in the residue were separately estimated with the following result:—

Sulphuric acid	(SO_3) =	67·5
Ammonia	$(NH_4)_2O$ =	9·8
Alumina	(Al_2O_3) =	22·4
		99·7

The ammonia calculated to sulphate corresponds to 24·86 per cent. $(NH_4)_2SO_4$. This contains 15·3 sulphuric acid, leaving 52·43 SO_3 in combination as sulphate of alumina. This corresponds to 22·5 Al_2O_3 (Cas $Al_2(SO_4)_3$) as against 22·4 found.

Hence it appears that in the sample worked over, no loss of sulphuric acid from sulphate of alumina had taken place.

Against this is to be placed the fact that I have frequently found in cream of tartar substitutes, a higher percentage of alumina than corresponded to the available sulphuric acid present; and I am of opinion, that in a sample of alum burnt to nearly or complete loss of ammonia salt, it would be found that the alumina sulphate had undergone more or less decomposition.

20. When sulphate of ammonia is largely present in alum the titration with soda must be performed with great care to avoid aberrant results due to decomposition of sulphate of ammonia and liberation of ammonia. A sample of commercial ammonia alum (crystallized) gave the following results on titration with soda:—

Titrated cold—phenol-phthalein (*a*)	621 cc. $\overline{N}$
" " " (*b*)	630 cc. $\overline{N}$
Mean	=625·5 cc. $\overline{N}$

Titrated cold—coralline (*a*)	590 cc. $\overline{N}$
" " " (*b*)	590 cc. $\overline{N}$
" boiled phenol-phthalein (*a*)	702 cc. $\overline{N}$
" " " (*b*)	718 "
" " " (*c*)	719 "
" " " (*d*)	696 "
" " coralline (*a*)	600 cc. $\overline{N}$
" " " (*b*)	626 cc. $\overline{N}$
Mean	=613 cc. $\overline{N}$

The acidity (theory) for pure ammonia alum is 661 cc. $\overline{N}$; that obtained with pure alum was 648 cc. $\overline{N}$ (see section 19).

It would seem that in boiling solution coralline works better than phenol-phthalein. Prolonged boiling with excess of soda causes great loss of ammonia which escapes detection when phenol-phthalein is used. On heating to loss of 60·5 per cent of weight, *i. e.*. about 2 per cent short of total loss of sulphate of ammonia, the available acidity was 1565 cc. $\overline{N}$ per 100 grammes.

21. Commercial burnt alum as furnished to the manufacturers of baking powders is not usually burnt to anything like complete loss of ammonia salt. A sample obtained through the Department of Customs gave an acidity of 1176 cc. $\overline{N}$ per 100 grammes, which may be taken as fairly representing the average article in the trade.

22. I do not know that potash alum is used in cream of tartar substitutes. In the event of an excess of carbonate of soda with ammonia alum a secondary reaction of ammonia with carbonate of soda, forming volatile carbonate of ammonia—an effective leavening agent—may take place under favourable conditions, but is is questionable whether this consideration enters into the calculations of the manufacturers of baking powder.

In an experiment with pure potash alum I found as follows:—Loss at 130° C.=38·2 per cent of weight. This corresponds to a loss of 84 per cent of its water of crystallisation. Acidity as crystallised allum—647·5 cc. $\overline{N}$ by soda and phenol-phthalein. On using normal carbonate of soda solution, I obtained 624 cc. $\overline{N}$. Theory requires 622 cc. $\overline{N}$ for 100 grammes $K_2SO_4, Al_2(SO_4)_3\ 24\ H_2O=949$. The acidity of the sample dry at 100° C. was 960 cc. $\overline{N}$. Theory requires $\frac{100}{62}\times 632=1002$ cc. $\overline{N}$.

23. The presence of hydrate of alumina does not seriously interfere with the determination of available acid in bi-tartrate ot potash by soda titration with phenol-phthalein as indicator.

An actual experiment, using nearly 2 grammes hydrate of alumina with 2·5 grammes bi-tartrate gave acidity =512 cc. $\overline{N}$ instead of 516 cc. $\overline{N}$ per 100 grammes.

24. On neutralizing burnt alum with soda, using phenol-phthalein as indicator,—evaporating to dryness and igniting—taking up the dry residue with normal sulphuric acid, and titrating back with soda (as in determination of total tartaric acid or tartrates, see section 10), the difference between the amount of normal acid used in effecting solution, and that of normal soda, used in effecting neutralisation is not greater than might be expected from the difficulty of ascertaining the exact point of neutralization in burnt alum. In two experiments I obtained, using 20 cc. acid for solution,—

1. Soda exactly equivalent to acid used.
2. Soda in excess equal to 5 cc. per 100 grammes of burnt alum.

25. When, however, burnt alum and bi-tartrate of potash are present together the process described in section 10 for estimation of tartrates does not give satisfactory results.

Mixture 1.—Burnt alum	75
Bi-tartrate potash	25
	100

The available acidity of this mixture should be $\frac{75}{100}\times 1170\times\frac{25}{100}\times 523=1015$ cc. $\overline{N}$ per 100 grammes. Titration with soda gave (*a*) 958 (*b*) 950, mean=954 cc. $\overline{N}$. On treating the neutralized solution of 5 grammes as described in section 10, I obtained (*a*) 68 (*b*) 82 cc. $\overline{N}$ per 100 grammes as representing organic acids. These numbers correspond respectively to 6·39 and 7·71 per cent KHC_4H_4O6, instead of 25 per cent present.

Mixture 2.—Burnt alum	3·75 grms.
Cream tartar	1·75 "
	5·50

The acidity should be 1230 cc. $\overline{N}$ as calculated; as found by soda it was 1208 cc. $\overline{N}$ per 100 grammes. Organic acids on evaporating, igniting, &c., were 93 cc. $\overline{N}$ instead of 338 cc. $\overline{N}$ per 100 grammes, (*i. e.*, 8·74 per cent instead of 31·77 per cent KHC_4H_4O6).

26. The only explanation of this peculiarity which I can suggest, is the formation of double tartrates of alumina and soda, which are either neutral to phenolphthalein, or so slowly decomposed by soda in excess as to lead to the errors in determining the available acidity which are illustrated in the preceding section.

Of course on submitting such tartrates to ignition, the organic acid equivalent to the alumina in combination would be completely destroyed.

27. Acid phosphate of lime seems to be present in the Canadian market as a cream of tartar substitute, in two conditions:—

1. So-called "straight phosphate," that is acid phosphate containing the whole of the sulphate of lime formed as a bye-product during manufacture from apatite or bone-ash (chiefly, if not altogether, the former).
2. Purified acid phosphate, made by dissolving the soluble phosphate out of the mixed salts obtained by action of sulphuric acid on tri-calcium phosphate, and evaporating the filtered solution. The product in this case is so deliquescent as to necessitate its being mixed with starch, flour or other material to render it capable of being powdered.

In the "straight" phosphate, the sulphate of lime, which, provided the manufacture is perfect, forms 53·8 per cent by weight of the total product;

$$\underset{310}{Ca_3\,P_2\,O\,8} + \underset{196}{2\,H_2\,SO_4} = \underset{272}{2\,Ca\,SO_4} + \underset{234}{H_4\,Ca\,P_2\,O\,8}$$

answers the purpose of a dryer, and this is probably considered a justification for its presence by some manufacturers.

Still a third mode of preventing the too great deliquesence of the product is to leave a large percentage of unchanged tri-calcic phosphate in the manufactured article. I have not met this in any cream of tartar substitute, but in a baking powder in which only 2·48 per cent of SO_3 was present, I found 40·32 per cent of P_2O_5; and the efficiency of the sample showed most of this to exist as neutral salt.

28. A sample of straight phosphate obtained from the manufacturer, gave the following results on analysis:—

Moisture, loss at 100° C.	5·28	per cent.
Lime (CaO)	31·70	"
Sulphuric acid (SO_3)	29·695	"
Phosphoric acid (P_2O_5). Total =	23·25	"
" " soluble in water	19·95	"
P_2O_5 insoluble	3·30	"

Available acidity (soda and phenol-phthalein) = 690 cc. N̄ per 100 grammes.

The sulphuric acid found corresponds to 51·22 per cent of calcium sulphate, or on the dry substance to nearly 54 per cent, so that the amount of calcium sulphate present would indicate complete conversion of tri-calcic phosphate. Such conversion, however, would give 28·6 per cent P_2O_5 in the product instead of 24·05 per cent (calculated on the dry substance) found. This points to the existence of hydrated sulphate in the product, which also contains phosphoric acid to the extent of 3·3 per cent either as unchanged phosphate or in the form of di-calcic salt—($H_2Ca_2P_2O_8$).

29. A sample of so-called pure superphosphate of lime, obtained from Brodie's Works, Smith's Falls, gave the following results:—

Loss of weight at 100° C	7·80 per cent.
Sulphuric acid (SO_8)	0·07 "

Acidity to soda = 495 cc. N̄ per 100 grammes.
Maize starch (air dried) = 52 per cent.
" " dry at 100° C = 47·8 per cent.
100 − (7·8 + 47·8) = 44 per cent (approximate) of acid phosphate of lime.

Assuming this to have the composition indicated by the formula $H_4\,Ca\,P_2\,O_8$ and to react with soda, according to the following equation:—

$$3\,H_4\,CaP_2\,O_8 + 8\,NaOH = Ca_8\,P_2\,O_8 + 4\,HNa_2\,PO_4 + 8\,H_2\,0$$

44 parts acid phosphate should require 501 cc. normal soda.

30. There is some difficulty in ascertaining the exact point of neutrality with phosphoric acid and soda using phenol-phthalein as indicator. In order to determine the possible error in use the following experiment was made:—

5 grammes pure sodium phosphate ($HNa_2\,PO_4$, $12H_2O$) dissolved in water gave an alkaline reaction with phenol-phthalein. On adding 0·7—0·8 cc. normal sulphuric acid the neutral point was reached; but it was found impossible to read nearer than to between one and two-tenths of a cubic centimetre of normal acid.

On adding 10 cc. normal sulphuric acid to the neutral solution, boiling and titrating back with normal soda, the normal point was reached when 8·7—8·9 cc. had been added.

In order, therefore, to ensure the existence of the phosphoric acid as di-sodic phosphate it is necessary to add soda solution to a strong alkaline reaction; and this requires about 1 cc. for 5 grammes of sodic phosphate after the first appearance of a reddish tint in the liquid.

31. In mixtures of acid phosphates of lime (containing starch) and bi-tartrate of potash it is impossible to get accurate results for tartaric acid by the method described in section 10.

A mixture—

Superphosphate lime purified phosphate (see section 29)	75
Bi-tartrate potassium	25
	100

Available acidity should be $\frac{75}{100} \times 495 + \frac{25}{100} \times 532 = 504$ cc. N̄.

The acidity obtained by titration with soda was 468 cc. N per 100 grammes of the mixture.

The organic acids estimated as carbonates (see section 10) amounted to 230 cc. N = 21·6 per cent bi-tartrate of potash, a loss of 3.4 per cent.

A mixture was made as follows:—

"Straight phosphate" (par. 28)	30 parts.
Bi-tartrate potassium	25 "
Calcium tartrate (par. 5)	25 "
Tartaric acid	20 "
	100

Available acidity should be—

30 per cent of 690=207 due to "straight" phosphate.
25 " 532=133 " bi tartrate of potash.
20 " 1333=266 " free tartaric acid.

606 cc. $\overline{\text{N}}$ per 100 grammes.

Total organic acid $\frac{25}{\cdot094}=255\cdot3$ due to bi-tartrate potash.
$\frac{25}{\cdot130}=192\cdot3$ " calcium tartrate.
$\frac{20}{\cdot075}=266\cdot6$ " free tartaric acid.

714·2 cc. $\overline{\text{N}}$ per 100 grammes.

Combined organic acid $=\frac{255\cdot3}{2}+192\cdot3=319\cdot9$ cc. $\overline{\text{N}}$ per 100 grammes.

This was used in the following experiments:—

(1.) Available acidity—soda and phenol-phthalein, *boiling*,

$\left.\begin{array}{l}(a.)\ 30\cdot65\\(b.)\ 31\cdot05\end{array}\right\}=30\cdot85=617$ cc. $\overline{\text{N}}$ per 100 grammes.

(2.) Available acidity—soda and phenol-phthalein, *cold*,

$\left.\begin{array}{l}\left.\begin{array}{l}(a.)\\(b.)\end{array}\right\}=26\cdot475=529\cdot5\text{ cc. }\overline{\text{N}}\\\left.\begin{array}{l}(c.)\\(d.)\end{array}\right\}=26\cdot775=535\cdot5\text{ cc. }\overline{\text{N}}\end{array}\right\}=532\cdot5$ cc. $\overline{\text{N}}$

(3.) On extracting 3 grammes with 250 cc. alcohol the following acidity was found:—

$\left.\begin{array}{l}(a.)\ 9\cdot3\text{ cc. }\overline{\text{N}}\\(b.)\ 8\cdot5\text{ cc. }\overline{\text{N}}\end{array}\right\}=8\cdot9$ cc.$=296\cdot7$ cc. $\overline{\text{N}}$ per 100 grammes.

(4.) On evaporating neutralized mixture to dryness, igniting, dissolving in excess H_2SO_4 $\overline{\text{N}}$ and titrating back after boiling off CO_2, obtained organic acids= 762 cc. $\overline{\text{N}}$ per 200 grammes mixture.

(5.) On igniting 5 grammes of mixture *per se* taking up with H_2SO_4 $\overline{\text{N}}$, etc., obtained, combined organic acids=(a) 6·4 (b) 6·5—mean=6·45 cc.=129 cc. $\overline{\text{N}}$ per 100 grammes.

SYNOPSIS.	Present.	Found.
1. Available acidity	606	617
2. " " estimated cold	....	533
3. Tartaric acid, by alcohol extraction	266	297
4. Total organic acids	714	762
5. Combined organic acids	320	129

The errors in 1 and 4 are due to the difficulty in hitting off the end point in neutralizing with soda. In 3, we have free phosphoric acid extracted by alcohol, while 5 shows the impossibility of estimating organic acids with accuracy by ignition in presence of acid phosphate, which liberates the organic acid.

33. The efficiency of a mixture of burnt alum with acid phosphate of lime is not the sum of the acidities of the components. To establish this fact I may quote the following results:—

A. *Burnt Alum.*—The sample used was a commercial cream of tartar substitute. Acidity, as measured by normal soda, was 1176 cc. $\bar{N}$ per 100 grammes.

B. *Acid Phosphate of Lime.*—A commercial sample, the acidity of which to normal soda, was 500 cc. $\bar{N}$ per 100 grammes.

1. A mixture of A and B in equal proportions by weight gave acidity to soda equal to 710 cc. $\bar{N}$ per 100 grammes instead of $\frac{1176 \times 500}{2} = 838$ cc. $\bar{N}$, showing a decrease of efficiency amounting to 128 cc. $\bar{N}$ or $\frac{128 \times 100}{838} = 15 +$ per cent.

The following mixture was then made:—

C.—Burnt alum (A) and bi-carbonate of soda in the ratio 100 : 98·8.

D.—Acid phosphate of lime (B) and bi-carbonate of soda in the ratio of 100 : 42.

E.—A mixture of equal weights of C and D.

On boiling with water (2 grammes in each case) and absorbing CO_2 by potash

(C.) gave 24·85 per cent CO_2
(D.) " 12·95 " "
(E.) " 15·05 " "

Hence, for 100 parts burnt alum used with bi-carbonate soda, we get (C) $\cdot 2485 \times 199 = 49 \cdot 45$ CO_2.

For 100 parts acid phosphate lime so used we get (D) 18·39 CO_2.

100 grammes of the mixture (E) contains $\frac{100}{199} \times 50 = 25 \cdot 1$ grammes alum, and $\frac{100}{142} \times 50 = 35 \cdot 2$ grammes acid phosphate lime.

Used each separately in a baking powder, these amounts of alum and acid phosphate give:—

25·1 alum..(C) = 12·41 grammes CO_2
35·2 acid phosphate...............................(D) = 6·48 " "
18·89

Instead of which we obtain only 15·05 grammes CO_2, showing a deficiency of 3·84 grammes, (=20·3 per cent) and of this a portion is derived from the excess of bi-carbonate of soda due to the change:—$2\ H\ Na\ CO_3 = Na_2\ CO_3 + H_2\ O + CO_2$. This loss of efficiency is doubtless due to the interaction of the phosphoric acid with the alumina, by which phosphate of alumina is formed, and phosphoric acid rendered unavailable for the decomposition of bi-carbonate of soda.

34. In baking powders and cream of tartar substitutes when acid phosphate of lime and alum are present together, the accurate estimation of phosphoric acid and alumina becomes a matter of considerable difficulty. I select the following experimental work as bearing on this subject:—

Organic acid and starch are got rid of by igniting in platinum. The residue is dissolved in hydrochloric acid (unless the molybdate precipitation is used in $P_2\ O_5$ estimation, in which case nitric acid is the solvent), filtered into a graduated flask, and made up to a known volume.

The precipitation of phosphoric acid as magnesium ammonium phosphate in presence of citric acid, was carried out as described by Sutton. (Vol. analysis, fifth edition, p. 247), except that the magnesium phosphate precipitate was weighed as pyrophosphate instead of estimated volumetrically by uranium.

The following samples give results obtained by me, as checked by the phosphomolybdate method.

Phosphoric acid found as P_2O_5.	Molybdate method.	Citro-magnesia method.
(a)	5·664	4·608
(b)	2·800	2·430
(c)	40·320	36·672

To determine the solubility of phosphate of alumina in acetic acid I made a solution of 5 grammes pure potash alum in 250 cc. In each of the following estimations 20 cc. (= 0·4 gram alum) was precipitated by excess of ammonium phosphate, ammonia added to faintly alkaline reaction, then acetic acid. In the first experiment the acetic acid was added without measurement; in the last three cases 100 cc. of a solution of 50 cc. glacial acid diluted to 1 litre was used. The precipitation was effected in cold solution, the precipitate washed on the filter with dilute acetic acid (10 cc. glacial acid to 1 litre), about 100 to 150 cc. wash liquid being used, the dry filter and contents strongly ignited—

20 cc. (·4 gram alum = 0·103 Al PO_4

Al PO_4 obtained from 20cc...... .... a. 0·086
b. 0·098
c. 0·095
d. 0·097

When phosphoric acid is precipitated by alumina in excess, although free acetic acid is present (in proportions just mentioned) basic phosphates of alumina of varying composition are thrown down. It is therefore necessary to ensure the presence of excess of phosphoric acid in these mixtures. The precipitate (Al PO_4) gives the alumina present, and the excess of phosphoric acid is obtained by a titration with uranium acetate (or nitrate). I have worked as follows:—

5 grammes of the sample is neutralized by soda solution, a slight excess of soda being used to convert any sulphate of ammonia into soda salt and thus prevent loss of sulphuric acid on ignition, if the sulphuric acid is to be estimated in same solution. The whole is evaporated to dryness in platinum and ignited to destroy organic matter. The residue is repeatedly heated with small quantities, say 5 cc. of hydrochloric acid, till complete solution is effected, the filtrate being made up to a known volume, say 125 cc. Sulphuric acid comes out too low in this solution, owing to loss as sulphuretted hydrogen on decomposing the sulphides formed by reduction of sulphates in contact with carbon during fusion. The loss is not a constant one; but experiments show it to be small enough to be neglected in commercial work.

To 50 cc. of this solution (= 2 grams) is added 5 cc. of a standard solution of sodium phosphate (·05 – ·06 P_2O_5) then 20 cc. of a 10 per cent solution of acetate of potassium. (Should too much free hydrochloric acid be present in the solution, this must be partly neutralized by soda, until such an amount only is present as may be neutralized by the first ten cubic centimetres of acetate of potash added, which may be known by the appearance of the precipitate of aluminum phosphate. This ensures the presence of a nearly constant and not too great excess of free acetic acid).

The precipitate is allowed to settle, then washed on a filter with about 150 cc. of a solution of 10 cc. glacial acetic acid in 1 litre water.

The precipitate is dried, ignited and weighed as Al PO_4, from which the Al_2O_3 is calculated (factor = 0·4204), In the filtrate the excess of P_2O_5 is determined by uranium solution (standardized under similar conditions). From the total P_2O_5 found both as $Al\,PO_4$ and by uranium is deducted the amount added as sodium phosphate, the remainder being the P_2O_5 sought.

The following solutions were made to imitate conditions frequently occurring in cream of tartar analysis:—

Solution A.—Microcosmic salt was dissolved in water and the contained phosphoric acid estimated by magnesia. This was added to a solution of pure potash alum so as to give a solution of the following value:—

1 c.c.=P_2O_5 0·00992; SO_3 0·03107 Al_2O_3 0.01.

Solution B.—Made from *A*, by adding 17·875 grammes calc spar (=10 grammes CaO) dissolved in hydrochloric acid, the whole made up to 1 litre.

1 cc.= P_2O_5 0·00248; SO_3 =0·00777 Al_2O_3 =0·0025; CaO =0·005.

The sodium phosphate solution referred to below contained 0·011 P_2O_5 per 1 cc.

The following experiments were made by Mr. Lefebvre, of the Inland Revenue Department (Nov., 1889).

a.—To 10 cc. solution *A* were added 50 cc. water, 5 drops concentrated hydrochloric acid, 5 cc. sod. phos. solution (=0·055 P_2O_5), ammonia to alkaline reaction; acetic acid (1 — 10) in slight excess. The whole heated on water-bath, filtered, the precipitate washed with dilute acetic acid (1 to 100), dried, ignited and weighed as $Al\,PO_4$; the filtrate titrated with Uranium for P_2O_5.

$$a\ 1.\ \mathrm{Al\,PO_4}=\cdot2221\left\{\begin{array}{l}\mathrm{Al_2O_3}=0\cdot0933\\ \mathrm{P_2O_5}=0\cdot1288\end{array}\right.$$

$$\mathrm{P_2O_5}\ \text{in filtrate}=0\cdot0260$$

$$\text{Total}\ \mathrm{P_2O_5}=0\cdot1548$$

$$a\ 2.\ \mathrm{Al\,PO_4}=\cdot2162\left\{\begin{array}{l}\mathrm{Al_2O_3}=0\cdot0908\\ \mathrm{P_2O_5}=0\cdot1254\end{array}\right.$$

$$\mathrm{P_2O_5}\ \text{in filtrate}=0\cdot0265$$

$$\text{Total}\ \mathrm{P_2O_5}=0\cdot1519$$

$$a\ 3.\ \mathrm{Al\,PO_4}=\cdot2188\left\{\begin{array}{l}\mathrm{Al_2O_3}=0\cdot0919\\ \mathrm{P_2O_5}=0\cdot1269\end{array}\right.$$

$$\mathrm{P_2O_5}\ \text{in filtrate}=0\cdot0260$$

$$\text{Total}\ \mathrm{P_2O_5}=0\cdot1529$$

$$a\ 4.\ \mathrm{Al\,PO_4}=\cdot2255\left\{\begin{array}{l}\mathrm{Al_2O_3}=0\cdot0947\\ \mathrm{P_2O_5}=0\cdot1308\end{array}\right.$$

$$\mathrm{P_2O_5}\ \text{in filtrate}=0\cdot0250$$

$$\text{Total}\ \mathrm{P_2O_5}=0\cdot1558$$

Résumé—

Al_2O_3 present................0·1000
Mean Al_2O_3 found.........0·0927
Mean error....................0·0073 defect=7·3 p. cent.
Maximum error ....0·0092 "
Minimum " ....0·0053 "
P_2O_5 present..................0·0992 + ·055=0·1542
Mean P_2O_5 found.......=0·1539
" error................=0·0003 P_2O_5 defect.
Maximum error ....=0·0023 " "
" " ....=0·0016 " excess.

Sum..........= ·0039

Maximum error......... = 4·0 per cent of P_2O_5 present.

b. Used 100 cc water to dilute, and did not apply heat in precipitating.

$$b\ 1.\ Al\,PO_4=\cdot2100 \left\{\begin{array}{l} Al_2O_3=0\cdot0882 \\ P_2O_5=0\cdot1218 \end{array}\right.$$
P_2O_5 in filtrate=0·0290

Total P_2O_5=0·1508

$$b2.AlPO_4=0\cdot2136= \left\{\begin{array}{l} Al_2O_3=0\cdot0897 \\ P_2O_5=0\cdot1239 \end{array}\right.$$
P_2O_5 in filtrate=0·0290

Total P_2O_5=0·1529

Mean Al_2O_3 found =0·0890
" P_2O_5 " =0·1519

c. Used 10 cc. soda solution—worked cold.

$$c\ 1.\ Al\,PO_4=\cdot2143 \left\{\begin{array}{l} Al_3O_3=0\cdot0900 \\ P_2O_5=0\cdot1243 \end{array}\right.$$
P_2O_5 in filtrate=0·0745

Total P_2O_5=0·1988

$$c\ 2.\ Al\,PO_4=\cdot2155 \left\{\begin{array}{l} Al_1O_3=0\cdot0905 \\ P_2O_5=0\cdot1250 \end{array}\right.$$
P_2O_5 in filtrate=0·0755

Total P_2O_5=0·2005

Mean Al_2O_5 found=0·0903. Error =9·7 per cent.
" P_2O_5 " =0·1997. " =4·8 "
P_2O_5 present =0·0992 + 0·110=0·2092.

d. To 50 cc. solution B were added 100 cc. water, 10 cc. soda phosphate solution and 50 cc. ammonia (1 – 6), and 15 cc. acetic acid (1 – 10), heated, filtered, etc., as in preceding work.

$$d\,1.\ AlPO_4 = \cdot2850 \begin{cases} Al_2O_3 = \cdot1197 \\ P_2O_5 = \cdot1653 \end{cases}$$

P_2O_5 in filtrate = ·0735

Total P_2O_5 = ·2388

$$d\,2.\ AlPO_4 = \cdot2978 \begin{cases} Al_2O_3 = \cdot1251 \\ P_2O_5 = \cdot1727 \end{cases}$$

P_2O_5 in filtrate = ·0685

Total P_2O_5 = ·2412

Al_2O_3 present = 0·1250
Mean Al_2O_3 found = 0·1224
Mean error = 0·0026 = 2 per cent of Al_2O_3 present
P_2O_5 present = 0·234
Mean P_2O_5 found = 0·240
Mean error = 0·006 = 2·7 per cent of P_2O_5 present (excess).

These results may be taken to show that while the process is not faultless, its simplicity may justify its use when strict accuracy is not required.

Mr. Lefebvre precipitated the alumina in 10 cc. of solution A, after precipitating the phosphoric acid by molybdate of ammonia. The precipitate was re-dissolved in nitric acid, and again precipitated by ammonia. Duplicate estimations gave

A. Al_2O_3	= 0·1001
B. Al_2O_3	= 0·1001

Mean error = 0·0001 = 0·1 per cent of Al_2O_3 present.

36. Starches of different kinds are largely employed (1) as a filling in baking powders, (2) as an adulterant in genuine cream of tartar, (3) as a component for the various substitutes for cream of tartar.

In most cases the separated starch is used, but the flour (wheat and maize), in which gluten, cellulose, etc., are present, is occasionally employed.

The estimation of the starch by inversion and subsequent titration of the glucose with Fehling's solution is at best a tedious process, and has not, in my hands, given very satisfactory results. The following illustrative examples may possess interest:—

Inversion was effected by boiling a suitable weight of the substance (from 1 to 5 grammes according to the amount of starch present) with 150 to 200 cc. of dilute hydrochloric acid, containing 4 per cent of real acid, for five hours under a back flow condenser, cooling, neutralizing with soda, and making up to 250 cc.

A.—Acid phosphate of lime	48·5
Maize starch	51·5
	100·0

The starch contained 8·1 per cent of moisture, so that 51·5 represents 47·3 anhydrous starch. Estimation with Fehling's solution gave 46·3 per cent dry starch.

B.—Cream of tartar	36·00 (approximate).
Tartaric acid	7·95
Sulphate of lime	36·68
Maize starch	16·00
	96·63

This gave 5·5 per cent dry starch.

C.—Maize starch	44·1 (=40·5 dry starch).
Acid phosphate of lime	
Equivalent to P_2O_5	21·5
Alum (=Al_2O_3)	2·06
" &c., (SO_3)	4·80

This gave 39·47 per cent of dry starch.

D.—Corn (maize) flour gave 69·44 per cent of starch (dry).

E.—Corn starch, a pure sample (ascertained by microscopic examination), containing 6·1 per cent moisture gave 80·14 per cent starch (dry).

These, with other estimations which I have made, show that, while with great care to secure the right proportion of acid, time of boiling, degree of dilution, etc., starch may be accurately estimated by inversion, the method is too tedious, elaborate and uncertain when applied as a practical operation to cream of tartar and baking powder mixtures when the time which the analyst can give to the determination is limited.

The following experiments were made to determine the feasibility of separating, by appropriate solvents, the other constituents of the mixture, and weighing the residual starch.

Ten grams of the sample was used in each case. Where a starch comparatively free from gluten was contained in the sample the most efficient solvent was found to be dilute hydrochloric acid, about 5 parts of the strong acid to 100 parts of water by volume. Although a much stronger acid may be employed with most starches if the temperature is kept low. When *wheat flour* is used as a filling it will be found very difficult to filter the solution owing to the imperfectly dissolved gluten which clogs the filter paper. In this case I have found two per cent (volume) acetic acid the most efficient solvent for the gluten, and after its use if calcium sulphate, acid tartrate of potassium or phosphate of alumina should remain undissolved the sample may be treated with dilute hydrochloric acid. The separated starch has been, in every instance, submitted to microscopic examination at the same time for its specific identification and to ascertain its freedom from crystalline or other foreign matter. In the application of this method of working to nearly two hundred commercial samples of baking powders and cream of tartar substitutes, I have very seldom found the separated starch other than pure. Where foreign matter has been found I have either renewed the treatment by solvents or incinerated an aliquot portion, the ash being taken to represent the foreign matter present.

MIXTURE 1.—Bi-carbonate soda	25
Bi-tartrate potassium	25
Maize starch	50
	100

Solvent.—Water only used, 500 cc.; starch obtained (air-dry), 49·6 per cent, contained a few crystals of bi-tartrate traces only.

MIXTURE 2.—Bi-carbonate soda	24·7
Bi-tartrate potassium	55·3
Maize starch	20·0
	100·0

Solvent—Hydrochloric acid, 1 to 20 used 500 cc., followed by 250 cc. wash water; starch obtained, 19·5 per cent, quite free from crystalline matter.

MIXTURE 3.—Bi-carbonate soda	20·5
Bi-tartrate potassium	46·1
Wheat flour (strong)	33·4
	100·0

I failed to get a solution that I could filter when I used hydrochloric acid as solvent. On using acetic acid (1 to 50), employing 1 litre, I got a solution that filtered easily, obtaining 27 per cent starch, quite free from crystalline matter; using the factor 1·25 to convert wheat starch to flour—

27 × 125 = 33·75 per cent flour.

MIXTURE 4.—	Bi-carbonate soda	21
	Bi-tartrate potassium	47
	Wheat flour (biscuit)	34
		102

This mixture, treated like No. 3, gave 28·2 per cent wheat starch, very pure. The factor 1·25 (which is probably too large in such a case) gives 35·25 per cent flour.

The constancy of result for the same mixture is shown in the cases of nearly one hundred samples of commercial baking powders worked over in duplicate, the duplicate estimations seldom differing by more than one or two per cent.

The sample (10 grammes) was weighed into a large beaker and drenched with about 500 cubic centimeters of the solvent. This was done in the morning so that the sample might be stirred at frequent intervals during the day. It was then set aside to settle over night, the filtration and washing of the starch being proceeded with next morning, and the starch allowed to dry on the weighed filter at about 65° to 70° Fah., for 48 hours before weighing. I may add that I have found automatic stirring a very great improvement in this process, although most of my work had been done without this aid. I find that if the mixture be stirred for two hours in the forenoon, and allowed to settle for three hours or so, the starch may be filtered out and set aside to dry on the afternoon of the same day. I have tabulated below the results of work upon known mixtures intended to test the solvent power of hydrochloric acid diluted with water in the proportions 1 to 50 and 1 to 20:—

A.—	Maize starch	40
	Cryst. ammonia alum	60
		100
B.—	Maize starch	40
	Burnt ammonia alum	60
		100
C.—	Maize starch	40
	Burnt alum	30
	Cream of tartar	30
		100
D.—	Maize starch	40
	Burnt alum	30
	Calcium sulphate	30
		100
E.—	Maize starch	40
	*"Straight" acid phosphate of lime	60
		100

*NOTE.—i.e., Containing the Ca SO_4 found as a bye.product in manufacture from apatite.

F.—	Maize starch	40
	*Purified acid phosphate containing 52 per cent starch	60
		100

---

*NOTE.—i.e., Containing no Ca SO_4, and totally soluble.

G.—Maize starch	40
Cryste. Am. alum	30
"Straight" phosphate	30
	100

H.—Maize starch	30
Purified acid phosphate with 52 per cent starch	40
Burnt Alum	30
	100

Mixture.	Starch present.	Starch found using Acid 1 to 50.	Starch found using Acid 1 to 20.
A	40·0	36·3	37·4 pure.
B	40·0	48·2	38·4 "
C	40·0	40·5	38·0 "
D	40·0	44·7	43·2 some crystals Ca SO_4.
E	40·0	41·0	38·9 pure.
F	71·2	67·4	69·6 "
G	40·0	36·4	38·3 "
H	51·8	47·4	47·6 "

All the starches separated by (1 to 20) acid were pure except D, and had the sulphate of lime been added as *terra albi*, *i. e.*, the hydrated sulphate, there is no doubt that it would have been perfectly dissolved. It was added as plaster of Paris, a form in which it is never found in Baking Powder, not only because of the greater weight of the hydrated sulphate, but because the dry sulphate cakes on the addition of water, and is thus unsuitable for use in baking.

The available acidity of Cream of Tartar has generally been determined by titration with normal alkali. The conditions are not those which obtain in baking, when the cream of tartar is mixed in the dry state with a slight excess of bi-carbonate of soda before being mixed with the flour. The following experiments were made with the object of ascertaining how far the estimation of acidity by normal soda agreed with the results of treatment of the sample as mixed with bi-carbonate of soda in a baking powder. The samples examined were thoroughly mixed with bi-carbonate of soda in the proportions given in the table below, and in this mixture the carbon-dioxide liberated by boiling with water was estimated by absorption with caustic potash.

The mixtures used were as follows (the number in brackets is the Departmental number of the sample) :—

No. 1 (6705)—Pure bi-tartrate of potassium.

No. 2 (8662)—Bi-tartrate potassium	74·8
Tartrate of lime	12·2
Sulphate of lime	13·0
	100·0

No. 3 (6711)—Bi-tartrate potassium	36·00
Free tartaric acid	7·95
Sulphate of lime	36·68
Maize starch	18·00
	98·63

No. 4 (6701)	—Bi-tartrate potassium	21·55
	Free tartaric acid	5·23
	Sulphate of lime	74·90
		101·68
No. 5 (6706)	—Free tartric acid	15·23
	Sulphate of lime	84·70
		99·93
No. 6 (8898)	—Acid phosphate lime	6·08
	Sulphate of lime	35·77
	Maize starch	47·00
	Bi-tartrate potassium	7·99
		99·84
No. 7 (8902)	—Acid phosphate lime	11·88
	Sulphate of lime	11·28
	Maize starch	71·00
	Bi-tartrate potassium	8·93
		103·09
No. 8 (8911)	—Acid phosphate lime	8·91
	Sulphate of lime	10·02
	Maize starch	70·00
	Free tartaric acid	9·38
		98·31
No. 9 (8912)	—Acid phosphate lime	9·24
	Sulphate of lime	38·50
	Maize starch	50·00
	Free tartaric acid	7·50
		105·24
No. 10 (8916)	—Acid phosphate lime	7·92
	Sulphate of lime	8·64
	Maize starch	79·00
	Bi-tartrate potassium	9·40
		104·96
No. 11 (8921)	—Acid phosphate lime	9·57
	Sulphate of lime	28·47
	Maize starch	50·00
	Bi-tartrate potassium	7·05
		95·09
No. 12 (8923)	—Acid phosphate lime	9·90
	Sulphate of lime	38·34
	Maize starch	46·00
	Bi-tartrate potassium	10·81
		105·05
No. 13 (8919)	—Acid phosphate lime	11·45
	Ammonia alum (dry)	11.53
	Sulphate of lime	45·88
	Maize starch	20·00
	Bi-tartrate potassium	11·28
		100·14

No. 14 (6704)—	Ammonia alum (dry)	11·06
	Sulphate of lime	67·60
	Maize starch	24·00
	Free tartaric acid	3·00
		105·66

The following results show that too high a value is given to cream of tartar when its acidity is taken in solution with normal soda. In line H of the table it will be seen that this excess is particularly large in No. 3—when part of the acidity is due to free tartaric acid, while it is notably small in Nos. 4 and 5, where the acidity is also largely due to free tartaric acid. This is one of the anomalies of my work which I cannot explain. It may be due to error in estimation of the CO_2. In acid phosphate powders the difference is usually considerable (See 7, 11, 12 and 13).

RESULTS of Examinations of Baking Powders.

A. Number of the sample........................	1	2	3	4	5	6	7	8	9	10	11	12	13*a*	13*b*	14
B. Acidity in cc.'s normal soda per 100 grammes of sample..............	530	400	360	185	125	170	205	210	225	160	210	210	300	300	160
C. Bi-carbonate of soda required for 10 grammes (calculated from B)........	4·45	3·36	3·02	1·55	1·06	1·43	1·72	1·76	1·89	1·34	1·76	1·76	2·52	2·52	1·34
D. Bi-carbonate of soda mixed with 10 grammes of the sample............	4·50	3·40	3·00	1·60	1·10	1·50	1·90	1·90	1·95	1·40	1·80	1·80	2·55	2·55	1·40
E. Weight of mixture D used in CO_2 estimation....	2·90	2·68	2·60	2·32	2·22	2·30	2·38	2·38	2·39	2·28	2·36	2·36	2·51	2·51	2·28
F. Weight of CO_2 obtained calculated for 100 grammes of the sample	22·80	17·00	13·50	8·10	5.45	7·50	7·85	9·10	9·45	6·45	8·15	7·75	12·00	12·05	6·80
G. Weight of CO_2 corresponding to acidity B, calculated for 100 grammes sample....	23·32	17·60	15·84	8·14	5·50	7·48	9·02	9·24	9·90	7.04	9·24	9·24	13·20	13·20	7·04
H. Difference between F. and G..................	0·52	0·60	2·34	0·04	0·05	......	1·17	0·14	0·45	0·59	1·09	1·49	1·20	1·15	0·24
K. Weight of CO_2 per 100 grammes of mixture D considered as a baking powder..............	15·72	12·79	10·39	6·98	4·91	6·52	6·60	7·65	7·91	5·66	6·91	6·57	9·56	9·69	5·96

The subjoined table shows the relative order of excellence among the samples as indicated by each method:—

Serial Differences. cc's. $\overline{N}$.	Order of Excellence by Normal Soda.	Number of Sample.	Order of Excellence as Baking Powder.	Serial Differences. CO_2 per cent.
....	1	1	1	.....
130	2	2	2	5·80
100	3	3	3	3·50
10	9	4	8	·05
35	14	5	14	1·00
15	10	6	11	·25
10	7	7	9	·25
5	6	8	6	·35
85	5	9	5	2·58
5	11	10	13	·35
.. .	11	11	7	·95
5	8	12	10	·10
....	3	13	4	1·47
5	13	14	12	·70

From this it appears that the indicated order of excellence is the same except where the differences in quality are very slight. Undoubtedly the method of valuation by weighing the liberated carbon dioxide is the more accurate in indicating the value of the cream of tartar as a component of baking powder, but it is doubtful whether this consideration will cause its adoption by analysts in view of the much greater labour which it involves.

NOTE 1.—A sample of commercial burnt alum gave acidity to soda=1176 cc. $\overline{N}$. On the basis of this acidity 100 grams. alum mixed with bi-carbonate soda in proper amount should yield 1176 × ·044=51·74 CC_2.

Obtained.......... .... 49·45 "

Difference.. .... 2·29 "

A sample commercial acid phosphate gave acidity=500 cc. $\overline{N}$ =500 × ·044=22·0 CO_2.

From mixture with bi-carbonate of soda.................... 18·39 "

Difference.. .... 3·61 "

NOTE 2.—In alkaline baking powders a certain amount of Co_2 is obtained from the excess of bi-carbonate of soda on boiling with water.

(*a*) 2·5 grammes bi-carbonate of soda boiled with 100 cc. water for 30 seconds gave 2·8 per cent CO_2.

(*b*) 5 grammes bi-carbonate soda boiled with 100 cc. water for 5 minutes gave 5·04 per cent CO_2.

38. In admixture with bi-tartrate of potassium free tartaric acid is easily detected by treatment with absolute alcohol—which dissolves tartaric acid readily, but does not dissolve the bi-tartrate.

If, however, acid phosphate of lime be present this is sufficiently soluble in alcohol to give a precipitate with alcoholic solution of potassium acetate, and thus render the test for free tartaric acid unreliable.

If, however, the alcoholic extract be evaporated to dryness on a watch glass over the steam bath, the crystalline residue of tartaric acid is quite characteristic and easily distinguished from the more or less amorphous residue which is left when acid phosphate is present. In mixtures of the two, however, the detection of tartaric acid is less easy. I have found the following method to work very well:—

Shake up 2—3 grammes of the substance to be examined with about 20 cc. of ether (ethyl oxide) in a test tube, without warming. The shaking is repeated four times during ten minutes and the ethereal solution filtered off. Bi-tartrate of potassium is quite insoluble in ether, and acid phosphate of lime is only dissolved in traces. On evaporation of the solvent on a watch glass characteristic crystals of tartaric acid are left if this be present in the substance examined. The residue from acid phosphate is in very minute quantity and scarcely crystaline, so that it cannot be mistaken for tartaric acid.

NOTE.—As illustrating the acidity dissolved out by alcohol from acid phosphate of lime I may quote the following experimental numbers :—"*Straight phosphate*" (see section 28), acidity of alcoholic extract of 5 grammes with 300 cc. alcohol (cold)=95 cc. $\overline{N}$ per 100 grammes. Total acidity of this sample=690 cc. $\overline{N}$.

A mixture of acid phosphate of lime and starch, having available acidity to soda=602 cc. $\overline{N}$ per 100 grammes, on treatment with cold alcohol gave acidity to alcoholic solution=208 cc. $\overline{N}$ per 100 grammes.

BULLETIN No. 27.—DISTILLED LIQUORS.

E. MIALL, Esq.,
Commissioner of Inland Revenue.

SIR,—It is a popular impression that many of the spirituous liquors offered for sale in Canada are more or less adulterated. When engaged in collecting food samples for analysis the inspectors connected with this branch are not unfrequently asked why they do not take samples at liquor stores, where, it is assumed, the mixing or "drugging" of liquors is carried on, and is much more injurious to the public health than are the falsifications of ordinary groceries or food stuffs. The same idea is sometimes mentioned in the newspapers, as the following extract from a recent issue of *La Presse* will show. Referring to spirituous liquors generally it says:—"Toutes ces liqueurs, plus ou moins mauvaises pour la santé de ceux qui en consomment quelques coups par jour, sont pernicieuses au plus haut degré pour ceux qui en abusent, et cela quand ces liqueurs sont de bonne fabrication et de source naturelle. Que sera cet empoisonnement, si ces mêmes liqueurs, pour la concurrence commerciale et pour atteindre le bon marché relatif, sont fabriquées de toutes pièces par un simple mélange d'alcool et d'eau, et de teintures avec essences et huiles diverses. C'est là, souvent, le genre simple des liquides absorbés à bon marché."

Not only is it believed that liquors are thus falsified, but it is maintained that the adulterants present in alcoholic beverages often produce worse effects than the alcohol itself. The Rev. Father McCallen, of St. Patrick's Church, Montreal, spoke as follows at a temperance convention held there on the 1st October, 1890:—"If a butcher sold tainted meat, a druggist compounded an injurious prescription, a baker adulterated his food products, they were pounced upon by the law; but those who send men to their homes intellectual, physical and moral wrecks, through the sale of adulterated beverages, which so quickly affect the brain, shatter the health, bring disease to the body and create an irresistible craving in the drunkard for still greater potations, did so with an impunity which is simply appalling to contemplate." In addition to this, it has been plainly stated that no returns have been made by the officers of the Government with regard to any analysis of intoxicating liquors. Mr. J. J. Curran, member for Montreal Centre, said in Parliament: "I believe that the officers of the Government are being instructed to analyse liquors issued from compounderies and distilleries, but I am not aware any such steps have been taken with regard to places where liquors are sold by retail." The Hon. the Minister of Inland Revenue was able at once to correct this mistake, and said: "When my hon. friend says that while analyses have been made of different items of food and drugs, none have been made of liquors, he is not, perhaps, aware that officers in the Chief Analyst's Branch of the Department have collected very large numbers of samples in different cities throughout the Dominion, with the view of ascertaining the condition of the liquors sold by retailers." I have thought it necessary to call your attention to these facts as a justification for addressing to you the following report on distilled liquors, and requesting that you will cause the same to be published in the Bulletin series, in order that the public may understand the exact position of this branch of the Department with reference to the alleged adulteration of the liquors in question.

If reference is made to the reports on the adulteration of food which have been published by the Department, it will be seen that the number of samples of distilled and malt liquors, wines, liqueurs and cordials collected and analysed since 1883 has been as follows:—

Year ending	Total No. of Samples Collected and Examined.	No. Found to be Adulterated	No. Found Doubtful.	No. Found to be Unadulterated.
June 30th, 1883	46	8	1	37
do 1884	113	9	3	101
do 1885	85	19	7	59
do 1886	210	31	3	176
do 1887	50	6	2	42
do 1888	164	23	10	131
do 1889	12	6	0	6
Total	680	102	26	552

All these samples were collected from retail dealers. In general it may be remarked that the adulterations detected consisted for the most part of dilution by water, and the addition of colouring substances not injurious to health. None of the substances enumerated in the first schedule of the Adulteration Act were found in any of the samples, with the exception of occasional traces of amyl-alcohol (fusel oil). Diligent search for methyl-alcohol (from the possible addition of methylated spirit) failed to discover any.

The liquors sold under the names brandy, rum, gin, whiskey, &c., have been found, when samples of each class were compared with each other, to vary considerably as regards alcoholic strength. Nevertheless, it was not found practicable to institute prosecutions for the sale of liquors deficient in alcohol, because in all such instances they had not been offered for sale under any professed standard, and because there is no legal standard of strength yet established for these liquors in Canada. No doubt section 19 of the Adulteration Act gives the Governor in Council power to establish such standards, but this has not yet been acted upon.

In the course of the discharge of their duties, the officers of this branch have become aware that, among the various brands of distilled liquors offered for sale in Canada, there are many of a spurious character, not derived from the source indicated by their names, and, in fact, as stated in the newspaper extract above quoted, made up of alcohol, water and other materials. It was, however, found to be a difficult matter to distinguish the factitious from the genuine article, and no attempt in this direction appears to have been made by any of the public analysts. In fact, the existence of this sort of manufacture has long been known to and recognized by the Inland Revenue Department, but it is only recently that the various ethers, essences and oils used in the production of spurious brandy, rum, gin, whiskey, &c., have been publicly offered for sale. This branch is, however, not yet in possession of any information to show that advantage has been taken of these facilities by retailers, to any very large extent, to manufacture brandies, &c., on their own premises.

In order to prosecute further the examination of these liquors, instructions were issued by yourself in the month of April last to the food inspectors for the collection of 180 samples of distilled liquors, which were obtained at the places indicated in the following list:—

Place.	High Wines.	Brandy.	Rum.	Gin.	Whiskey.				Total.
					Scotch.	Irish.	Malt.	Rye.	
Halifax, N.S	....	1	1	1	1	....	....	4	8
Truro, N.S	....	1	....	....	....	....	....	2	3
Pictou, N.S	....	1	....	....	1	....	....	1	3
Port Mulgrave	....	....	....	....	....	....	....	1	1
Port Hawkesbury	....	....	1	....	1	....	....	....	2
North Sydney	....	....	....	1	2	....	....	2	5
Sydney	....	1	....	....	....	....	....	1	2
Antigonish	....	1	....	....	2	....	....	....	3
New Glasgow	....	....	1	....	1	....	....	1	3
St. John, N.B	....	1	1	1	2	2	....	2	9
Sussex, N.B	....	1	....	....	....	....	....	2	3
Moncton, N.B	....	1	....	....	1	1	....	1	4
Shediac, N.B	....	1	....	....	1	....	....	1	3
Sackville, N.B	....	....	....	1	1	1	....	1	4
Quebec	1	....	1	1	....	3	3	....	9
St. Hyacinthe	....	1	....	....	....	....	2	1	4
Sherbrooke	....	....	1	....	....	....	1	1	3
Three Rivers	....	....	1	....	1	....	1	1	4
St. Joliette	....	1	....	....	....	....	1	1	3
Montreal	....	1	1	1	1	....	2	4	10
Lachute, P.Q	....	....	....	1	....	....	2	....	3
Hull, P.Q	....	1	....	1	....	....	2	1	5
St. Henri	....	....	....	1	....	....	2	1	4
Valleyfield	....	1	....	....	....	....	1	1	3
Huntingdon	1	....	....	....	....	....	1	1	3
St. Jérome	....	1	....	....	....	....	1	1	3
Ottawa	....	1	....	1	2	1	....	4	9
Trenton, Ont	....	....	1	....	....	1	1	1	4
Kingston	....	1	....	1	....	....	1	2	5
Brockville	....	....	1	....	1	1	....	2	5
Toronto	....	....	1	1	1	1	2	3	9
Orangeville	....	1	....	....	1	1	....	2	5
Shelburne	....	....	....	....	....	....	1	2	3
Brampton	1	....	....	1	....	....	1	1	4
Oshawa	....	....	1	....	1	....	1	....	3
Port Hope	1	1	....	....	....	1	....	....	3
Clinton	....	1	....	....	....	....	1	1	3
Woodstock	....	1	1	1	....	....	....	2	5
Norwich	....	....	....	1	....	....	1	1	3
Simcoe	....	1	....	....	....	....	1	2	4
Glencoe	....	....	....	1	....	....	1	2	4
Lucan	....	1	....	....	....	....	1	2	4
Total	4	23	13	16	21	13	31	59	180

These 180 samples were submitted to the various district analysts, and the duplicates, as required by law, forwarded to the Department. The reports of the analysts were all of the same character as in the former examinations of such liquors referred to above. On the other hand, the duplicate samples, along with some others specially selected, were subjected to a much more minute examination than usual, in this laboratory, one of the objects being if possible to detect any of the samples which might be of artificial origin. The tables hereto attached, Nos. I to VIII, give a description of the various samples, and form part and portion of the report, also hereto attached, of Mr. A. McGill, B.A., &c., Assistant Analyst to the Chief Analyst, who carried out the examinations.

I have to recommend this report to your attentive perusal, but I must also point out several of the results of it as worthy of special notice, and make some general remarks regarding each class of liquor described, with the view of arriving at proper definitions and legal standards for each, without which the administration of the Adulteration Act, so far as regards distilled liquors, will be impossible. For the various statements made and figures given I might give the authority, but I do not consider it necessary to burden this report with too many quotations.

Brandy.—The 24 samples varied in alcohol contents from 59·16 to 33·40 per cent by volume, or from 3·63 per cent over proof to 41·47 per cent under proof. Brandy imported in wood is usually understood by the trade to be 4 o. p.; in bottle it is commonly 15 u. p. This is equal to 85 per cent of proof spirit, or 48·54 per cent by volume of alcohol. Exactly one-half of the samples are below this limit, and their vendors would have been liable to prosecution had it been legally established as the lowest saleable percentage. On the other hand, if the English lowest limit of 25 u. p., or 75 per cent proof spirit, or 42·84 per cent by volume of alcohol, had been legalized in this country, then there would have been only three cases for prosecution, or 12·5 per cent of the samples collected. With reference to the amount of extract, "total solids," "dry substance." or, as it is called in the tables, "fixed matter dried at 100° C.", it is usually supposed that a brandy, being a distillate, should not contain more dry substance than it is capable of dissolving from the cask in which it is stored. According to Clifford Richardson, strong whiskey (with 43 per cent alcohol) after six months' storage in casks shows 0·0337 per cent of dry substance. This is the average of 8 samples, and the amount, after storage for four or five years, does not exceed 0·2 per cent. According to X. Rocques, (Bull. chim. 50, 157; 1888) the extract in 3 samples of genuine cognac (Chateau des Andreaux, Charente,) were as follows:—

Cognac, 1875	1·30	grammes per litre.
do 1848	3·30	do
do 1836	4·90	do

Assuming 2 grammes per litre as the maximum extract in a genuine, 8 year old, cognac, it follows that only 3 out of the 24 samples examined came up to this standard, and it becomes plain that what are usually considered the best qualities of brandy receive artificial additions for colouring or other purposes after distillation. Among these probably the least harmful are small quantities of syrup, the use of which is admitted by the manufacturers. Nevertheless. the German government has decided that cognacs containing it are not pure, and can only be imported on payment of a higher rate of duty. Additions are no doubt also frequent of alcohol which has not been produced from wine or grapes. It is notorious that large quantities of high-strength German spirit are imported into France for mixing with brandy, and even for making artificial imitations of it. Statistics show that the average total production of cognac by the Charente Departments does not amount to one-tenth of the quantity exported by France to foreign countries. It would, therefore, be unjust to regard all imported brandies as genuine, or as, in every case, very much better than the domestic product, some of which, as their vendors naively state, are "blended by themselves with rye whiskey." These vendors might very fairly maintain that their rye whiskey made from grain is superior to the German spirit made from potatoes. It does not seem that any of the samples examined are produced exclusively from high-grade alcohol. This conclusion is based on the results of the tests for opalescence in the distillate and for furfurol. It would not be wise, however, to place too much reliance upon the presence of the latter substance and of volatile oil or ether, because it would be an easy thing for manufacturers to add these if it became a matter of importance to them to render the detection of the adulteration impossible. In passing judgment upon the 24 samples examined it is very evident that none of them come up to the old or popular definition of brandy, namely, "ardent spirits distilled from wine without any subsequent addition." If this definition cannot be upheld, then a new one becomes necessary before the public analysts can give any reliable opinion as regards adulteration. The Select Committee of the

English House of Commons on British and foreign spirits, in their report, printed this year, call attention to this difficulty of definition, and say: "Foreign brandy consists of dilute alcohol flavoured with the bye-products of the grape, but British brandy is an imitation without these bye-products, and is made from a silent spirit." Under such circumstances, it would seem impossible for chemical analysis to render much service in the matter. It seems to be more a matter of smell and flavour, and that connoisseurs or experts experienced in these are the proper judges, and the persons to suggest a standard for brandy. Meanwhile, it would not be unreasonable to establish a lowest limit of variability for these liquors. It might also be possible to restrict their names, so that they should signify as follows:—

Cognac; made in the Charentes district and guaranteed free from admixture of foreign spirit.

Brandy; also imported from France, but without guarantee.

British Brandy; the imitations imported from England.

Canadian Brandy; imitations made in Canada.

Rum.—The strength of the 13 samples collected varies from 78.80 per cent alcohol by volume to 35·62 per cent, or from 32·82 per cent over proof to 37·51 per cent under proof. It is said to be usually imported into Canada in wood at from 32 to 42 over proof, and to be generally sold wholesale in this condition, but its value is based upon a price per gallon at 16 o. p. The latter strength corresponds to 66·21 per cent of alcohol by volume, which is somewhat higher than the French authority quoted by Mr. McGill, and, if adopted as the lowest limit, would cause 10 out of the 13 samples examined to be condemned. If the English lowest limit of 25 u. p. were adopted, which is equal to 42·84 per cent alcohol, then only 2 of the 13 would be condemned. If rum is to be regarded as a variety of ardent spirits, distilled in the West Indies from fermented sugar refuse, molasses, &c., then the amount of extract should not exceed 2 grammes per litre. But it is said that even at the place of production burnt sugar is mixed with the distillate in order to give it the desired colour. Genuine rums, according to recent analysis, vary in the amount of extract from 6·68 to 30·47 grammes per litre, which latter figure much exceeds any of the results given in Table II. It has not yet been found possible to make an accurate determination of the amount present of the peculiar ether to which rum owes its characteristic aroma, or to distinguish reliably betwixt the genuine and the adulterated article or artificial imitations. The only way in which to protect the public from the latter, at present, would seem to be so to arrange matters that no liquor could be sold as rum which was not imported direct from the country of production. It seems impossible to rely on the character of the rum imported from England, in view of the fact that the Excise authorities there allow an artificial mixture called Hamburg rum to be stored, and also to be blended in bond with the pure colonial product.

Whiskey.—In the wholesale trade of Montreal, Scotch whiskey in wood is usually imported at 11 over proof; in bottles at 15 under proof. As put on the market by Canadian distillers, it runs from 10 to 25 under proof. Taking the latter strength, 42·84 per cent alcohol by volume, which is also the legal lowest limit in England, as the lowest at which whiskey should be sold, and comparing with it all the whiskies described in Tables III, IV, V and VI, it will be found that the following are too low in alcohol:—

						Per cent.
Among	61	Rye whiskies	47	are too low	=	77
"	23	Scotch "	5	"	=	21·7
"	11	Irish "	2	"	=	18·2
"	33	White "	21	"	=	63·6
	128		75	are too low	=	58·6

These figures plainly show that there is a necessity for fixing "the limits of variability" as regards whiskey by Order in Council, as provided for in the Adulteration

Act. That law also provides that "Food shall be deemed to be adulterated, within the meaning of the "Act, if it is an imitation of, or is sold under the name of another "article." But in order to prove an imitation it is necessary, in many cases, to define the original article for which it is substituted. Therefore, a legal definition of the term "whiskey," as well as of the names for other distilled liquors, is necessary before any proceedings against parties selling the spurious articles can be undertaken, unless indeed such liquors are found to contain substances injurious to health.

Hollands and Old Tom.—The strength of gin ordinarly imported into Canada in wood is about proof, and, when bottled, 20 per cent under proof. Seven of the 21 samples examined and described in Table VII and VIII are below this strength. The lowest legal limit in England is, however, only 35 u. p., or 65 per cent. proof spirit which strength is exceeded by all the samples collected. The old definition of gin is "a kind of ardent spirits manufactured in Holland from rye and malt, in rectifying which juniper berries are added to the contents of the potstill to give the peculiar flavour." According to the analysts, about one-third of the number of samples collected do not answer to this definition. As there are British brandies and British rums so it appears there are also British gins. But the analysis of the latter under the name of Old Tom would lead one to class it among the liqueurs rather than under distilled liquors.

This investigation leads generally to the following conclusions:—

1. That the opinion held by many regarding the injurious character of the substances added to spirits or distilled liquors, for various purposes, is destitute of sufficient foundation. Some of the essences, ethers, &c., used by blenders or compounders, taken by themselves, may be said to be injurious, but the quantities used are so minute in the resulting product that they cannot be considered to have any worse effect on the human system than the dilute alcohol with which they are mixed.

2. That, in very many cases, liquors are sold under the designation of brandy, rum, Scotch and Irish whiskey, and gin, which have no right to such names, on account of their being merely imitations.

3. That this Branch finds it impossible under the Adulteration Act to prevent such sale until the limits of variability have been fixed and standards established by the Governor in Council or by Parliament.

I have the honour to be, Sir,
Your obedient servant,
THOMAS MACFARLANE
Chief Analyst.

30th October, 1891.

RESULTS of Examination of

TABLE I—

Date of Collection	No. of Sample.	Quantity Purchased.	Cost.	Name and Address of		Remarks regarding Sample.
				Vendor.	Manufacturer or Furnisher, as given by Vendor.	
1891.			$ cts.			
April 8..	9360	2 bottles	1 70	G. Goyette, Main St., Hull, P.Q.	H. N. Bate & Sons, Ottawa.	Taken from draught....
do 15..	9367	do .	1 50	O. Brodeur, St. Simon St., St. Hyacinthe, P.Q.	Finlayson, Hirsch & Co., Montreal.	Case...... ....
do 22..	9387	do .	2 00	Z. Larocque, 521 Craig St., Montreal.	Dufresne & Mongenais, Montreal.	Taken from draught....
May 12..	9977	do .	1 80	J. J. Power, 88 Russel St., St. John, N.B.	T. L. Bourke, St. John, N.B.	Sample from bottle as sold over bar.
do 18..	9983	do .	2 00	C. H. Fairweather, King St., Sussex, N.B.	Kenneth Campbell & Co., Montreal.	Draught. ....
do 20.	9987	do .	2 50	Moncton.	Kelly & Glassie, Halifax, N.S.	Bottle bears the name, Vallie & Co., France.
do 22..	9990	do .	2 00	do	Grace & Gastonquay, Halifax, N.S.	Bottle bears name of Jules Lefranc.
April 15..	10247	do .	2 50	A. A. Adams, Queen's Hotel, Port Hope.	Finlayson, Hirsch & Co., Montreal.	Bottle bears name of Jules Robins & Co.
do 17..	10256	do .	2 00	T. Farrell, Liquor Merchant, Kingston, Ont.	Imported.	Bottle bears name of E. Dumas.
do 23..	10263	do .	2 00	P. O'Connor, Bank St., Ottawa.	Louis Frères & Co.....	Case.......... ....
do 13..	10482	1½ qts..	1 85	Joseph Riter, Clinton, Ont.	....	Vendor states that it is blended by himself with rye whiskey.
do 14..	10488	do ..	1 75	L. A. Gunnit, Woodstock, Ont.	....	do do ..
do 16..	10494	1½ qts..	2 00	John Sutton, Simcoe, Ont.	Jas. Turner & Co., Hamilton, Ont.	Bottle has Barsac's name.
do 18..	10500	do ..	2 00	Edward Mara, Lucan, Ont.	R. H. Howard & Co., Toronto.	Bottle has name of Jules Robins.
June 8..	10677	3 pints .	1 50	J. T. Sullivan, Halifax, N.S.	A. McDougall & Co., Halifax.	Bottle has name of Hennessey. Draught.
do 22..	10683	2 bottles	1 50	J. C. Mahon, Truro, N.S.	Besquit & Bouche....	Draught.... ....
do 23..	10686	do .	1 50	Chas. L. Rood, Pictou, N.S.	Meagher Bros. & Co., Montreal.	Bottle labelled "Dufaure Frères."
do 25..	10697	do .	2 00	Chas. Ross, Sydney, C.B.	Grace & Gastonquay, Halifax, N.S.	Labelled Jules Lefranc & Cie.
do 26..	10700	do .	2 50	J. D. Copeland, Antigonish.	Lucien Bellot & Co....	Case....... ....
May 4..	11503	do .	2 00	Viau Frère, Market Hotel, Valleyfield, P.Q.	E. H. Hebert, Valleyfield.	Draught................
do 12..	11514	do .	1 60	Joshep Rivard, Notre Dame St., Joliette, P.Q.	Not known...........	do ....
do 13..	11517	do .	1 60	J. M. Richard & Co., St. Jerôme, P.Q.	Bottled by Vendor....	.. ..
April 2..	A.	do .	.....	Bate & Co., Ottawa. ..	Hennessey's V.O. Cognac.	Case.......... ....
Mar. 28..	B.	do .	4 00	Dufresne & Mongenais, Montreal.	....	Labelled "Champagne Cognac, 1858."
....	C.	. ...	.....	Prepared in laboratory	... .	....

Samples of Distilled Liquors.

BRANDY.

Results of Analysis.										
Specific Gravity of Sample at 15·5°C.	Sp. Gr. of Alcoholic Distillate at same Volume and Temp.	Difference.	Fixed Matter Dry at 100°C—Grammes per Litre.	Alcohol, per cent. by Weight.	Alcohol, per cent. by Volume.	Proof Spirit, p.c.	Opalescence on Diluting Distillate, 1: 2 Vols.	Furfurol Reaction.	Serial Number.	Remarks.
·9377	·9343	·0034	8·388	42·45	50·14	87·90	None.	Distinct	1	Probably factitious.
·9476	·9438	·0038	8·480	37·63	44·92	78·70	do	do	2	
·9642	·9615	·0027	5·844	27·51	33·40	58·54	Slight	Faint...	3	Lowest alcohol strength.
·9467	·9444	·0023	5·392	37·34	44·54	78·06	do	Distinct	4	Analysis by Mr. Babington.
·9332	·9301	·0031	10·576	44·60	52·44	91·90	do	do	5	do do
·9501	·9491	·0010	0·952	34·90	41·78	73·20	None.	do	6	Lowest solids.
·9193	·9152	·0041	9·024	51·10	59·16	103·68	Slight	Faint...	7	Highest alcohol strength.
·9353	·9289	·0064	16·784	44·83	52·80	92·54	do	do	8	Compare with 10500.
·9584	·9568	·0016	1·620	30·51	36·84	64·60	None.	do	9	
·9409	·9381	·0028	5·104	40·64	48·16	84·40	do	do	10	
·9471	·9455	·0016	2·504	36·79	43·90	76·92	do	do	11	
·9355	·9339	·0016	4·016	42·81	50·14	87·88	do	do	12	Analysis by Mr. Babington.
·9408	·9403	·0005	1·128	39·63	46·96	82·30	None.	Distinct	13	do do
·9204	·9151	·0053	16·648	51·08	59·16	103·68	Slight	do	14	
·9581	·9543	·0038	8·012	31·96	38·56	67·58	do	do	15	
·9334	·9278	·0056	12·348	45·38	53·34	93·50	do	Faint...	16	
·9442	·9399	·0043	8·692	39·65	47·16	82·66	Distinct.	do	17	
·9473	·9438	·0035	7·688	37·64	44·92	78·70	do	Distinct	18	
9373	·9318	·0055	13·092	43·56	51·42	90·14	Very slight.	do	19	
·9278	·9214	·0064	17·924	48·22	56·36	98·76	do	Faint...	20	Highest solids.
·9423	·9392	·0031	10·432	40·08	47·56	83·36	Slight	do	21	
·9464	·9420	·0044	10·028	38·60	46·02	80·64	Distinct.	Distinct	22	
·9367	·9339	·0028	9·180	42·66	50·34	88·20	do	do	23	
·9395	·9339	·0056	16·654	42·54	50·34	88·20	Slight	do	24	
·9311	·9305	·0006	3·872	44·40	52·08	91·26	None.	None...	25	Analysis by Mr. Babington.

RESULTS of Examination of

TABLE II—

Date of Collection	No. of Sample.	Quantity Purchased.	Cost.	Name and Address of		Remarks regarding Sample.
				Vendor.	Manufacturer or Furnisher, as given by Vendor.	
1891.			$ cts.			
Apr. 16..	9369	2 bottles	1 50	Fortier & Therrien, Bridge St., Sherbrooke, P.Q.	Not known..	Blended by vendor, who says it is a mixture of rye and rum.
do 17..	9375	2 do ..	2 00	H. Derome, Finlay Market Place, Quebec	do	Bought from a captain on board ship, name unknown. Draught.
do 22..	9386	2 do ..	1 50	A. Clark, 623 Craig St., Montreal.	James Guest & Co., Montreal.	Draught........ ....
May 11..	9978	2 qt. bts.	1 75	J. Horne & Co., 12 Water St., St. John, N.B.	do ..	do .. . .
Apr. 9..	10219	3 pints..	1 50	W. H. Maxwell, 105 Queen St. W., Toronto.	Uncertain	Case... ....
do 15..	10244	3 do ..	2 25	J. W. Ray, Queen's Hotel, Oshawa, Ont.	R. H. Howard, Toronto.	Taken from draught....
do 16..	10250	2½ pints.	0 85	A. M. Spafford, liquor merchant, Trenton, Ont.	Vendor	do ....
do 17..	10258	2 bottles	2 00	W. J. McHenry & Bros., liquor merchants, Brockville.	T. Carter, Kingston, Jamaica.	Case.. ... .
do 14..	10486	3 pints..	1 90	W. M. Milligan, Woodstock, Ont.	Dent, Woodstock, Ont.	Draught...... ....
June 8..	10675	3 do ..	0 90	Chas. Robinson, Halifax, N.S.	A. McDougall & Co., Halifax, N.S.	do ....
do 24 .	10690	2 bottles	1 60	John Stapleton, Port Hawkesbury, N.S.	O. Mullin & Co., Halifax, N.S.	do ... .
do 27..	10703	2 do .	2 00	A. C. Bell, New Glasgow, N.S.	Kenneth Campbell & Co., Montreal.	do ....
May 11..	11512	2 do .	1 50	Rousseau & Durand, Platon St., Three Rivers, P.Q.	Dufresne & Mongenais, Montreal.	do ....
				Artificial; prepared in the laboratory from patent still spirit and flavouring.		

Samples of Distilled Liquors—*Continued.*

RUM.

Results of Analysis.										
Specific Gravity of Sample at 15·5° C.	Sp. Gr. of Alcoholic Distillate at same Volume and Temp.	Difference.	Fixed Matter Dry at 100°C—Grammes per Litre.	Alcohol, per cent. by Weight.	Alcohol, per cent. by Volume.	Proof Spirit, p.c.	Opalescence on Diluting Distillate, 1:2 Vols.	Furfurol Reaction.	Serial Number.	Remarks.
·9340	·9302	·0038	·7048	44·35	52·18	91·42	Very slight.	Distinct	1	
·8954	·8899	·0055	11·904	62·01	69·94	122·58	Slight	Faint...	2	Highest solids. Stronger opalescence not obtainable by further dilution.
·9369	·9347	·0022	4·536	42·33	49·96	87·54	do	do ..	3	
·9171	·9151	·0020	4·176	51·22	59·16	103·68	Distinct.	do ..	4	
·9376	·9366	·0010	3·540	41·45	48·96	85·80	Very slight.	do ..	5	
·8772	·8751	·0021	7·872	68·60	75·80	132·83	Distinct.	do ..	6	Highest spirit strength.
·9445	·9427	·0018	2·768	38·33	45·60	80·00	None.	None ..	7	
·9323	·9293	·0030	6·768	44·81	52·62	92·22	Distinct.	Faint...	8	
·8953	·8950	·0003	5·064	60·22	67·94	119·06	Very slight.	Distinct	9	Stronger opalescence not obtained by further dilution.
·9591	·9585	·0006	2·160	29·48	35·62	62·44	Distinct.	Faint...	10	Lowest in alcohol and in solids.
·9576	·9557	·0019	2·900	31·13	37·56	65·82	do	Distinct	11	
·9314	·9301	·0013	2·916	44·53	52·26	91·58	do	Faint...	12	
·9361	·9343	·0018	3·308	42·54	50·14	87·88	do	do ..	13	
·9544	·9517	·0027	10·604	33·67	40·48	70·94	None.	None ..	14	

RESULTS of Examination of

TABLE II—

Date of Collection	No. of Sample.	Quantity Purchased.	Cost.	Name and Address of — Vendor.	Name and Address of — Manufacturer or Furnisher, as given by Vendor.	Remarks regarding Sample.
1891.			$ cts.			
Apr. 16..	9369	2 bottles	1 50	Fortier & Therrien, Bridge St., Sherbrooke, P.Q.	Not known..	Blended by vendor, who says it is a mixture of rye and rum.
do 17..	9375	2 do ..	2 00	H. Derome, Finlay Market Place, Quebec	do	Bought from a captain on board ship, name unknown. Draught.
do 22..	9386	2 do ..	1 50	A. Clark, 623 Craig St., Montreal.	James Guest & Co., Montreal.	Draught...... ....
May 11..	9978	2 qt. bts.	1 75	J. Horne & Co., 12 Water St., St. John, N.B.	do ..	do .. . .
Apr. 9..	10219	3 pints..	1 50	W. H. Maxwell, 105 Queen St. W., Toronto.	Uncertain	Case.. ....
do 15..	10244	3 do ..	2 25	J. W. Ray, Queen's Hotel, Oshawa, Ont.	R. H. Howard, Toronto.	Taken from draught....
do 16..	10250	2½ pints.	0 85	A. M. Spafford, liquor merchant, Trenton, Ont.	Vendor	do ....
do 17..	10258	2 bottles	2 00	W. J. McHenry & Bros., liquor merchants, Brockville.	T. Carter, Kingston, Jamaica.	Case.. ... .
do 14..	10486	3 pints..	1 90	W. M. Milligan, Woodstock, Ont.	Dent, Woodstock, Ont.	Draught..... ....
June 8..	10675	3 do ..	0 90	Chas. Robinson, Halifax, N.S.	A. McDougall & Co., Halifax, N.S.	do ....
do 24 .	10690	2 bottles	1 60	John Stapleton, Port Hawkesbury, N.S.	O. Mullin & Co., Halifax, N.S.	do ... .
do 27..	10703	2 do .	2 00	A. C. Bell, New Glasgow, N.S.	Kenneth Campbell & Co., Montreal.	do ... .
May 11..	11512	2 do .	1 50	Rousseau & Durand, Platon St., Three Rivers, P.Q.	Dufresne & Mongenais, Montreal.	do ....
				Artificial; prepared in the laboratory from patent still spirit and flavouring.		

Samples of Distilled Liquors—*Continued.*

RUM.

Results of Analysis.										
Specific Gravity of Sample at 15·5° C.	Sp. Gr. of Alcoholic Distillate at same Volume and Temp.	Difference.	Fixed Matter Dry at 100°C—Grammes per Litre.	Alcohol, per cent. by Weight.	Alcohol, per cent. by Volume.	Proof Spirit, p.c.	Opalescence on Diluting Distillate, 1:2 Vols.	Furfurol Reaction.	Serial Number.	Remarks.
·9340	·9302	·0038	·7048	44·35	52·18	91·42	Very slight.	Distinct	1	
·8954	·8899	·0055	11·904	62·01	69·94	122·58	Slight	Faint...	2	Highest solids. Stronger opalescence not obtainable by further dilution.
·9369	·9347	·0022	4·536	42·33	49·96	87·54	do	do ..	3	
·9171	·9151	·0020	4·176	51·22	59·16	103·68	Distinct.	do ..	4	
·9376	·9366	·0010	3·540	41·45	48·96	85·80	Very slight.	do ..	5	
·8772	·8751	·0021	7·872	68·60	75·80	132·83	Distinct.	do ..	6	Highest spirit strength.
·9445	·9427	·0018	2·768	38·33	45·60	80·00	None.	None ..	7	
·9323	·9293	·0030	6·768	44·81	52·62	92·22	Distinct.	Faint...	8	
·8953	·8950	·0003	5·064	60·22	67 94	119·06	Very slight.	Distinct	9	Stronger opalescenee not obtained by further dilution.
·9591	·9585	·0006	2·160	29·48	35·62	62·44	Distinct.	Faint...	10	Lowest in alcohol and in solids.
·9576	·9557	·0019	2·900	31·13	37·56	65·82	do	Distinct	11	
·9314	·9301	·0013	2·916	44·53	52·26	91·58	do	Faint...	12	
·9361	·9343	·0018	3·308	42·54	50·14	87·88	do	do ..	13	
·9544	·9517	·0027	10·604	33·67	40·48	70 94	None.	None ..	14	

RESULTS of Examination of

TABLE III—

Date of Collection	No. of Sample.	Quantity Purchased.	Cost.	Name and Address of		Remarks regarding Sample.
				Vendor.	Manufacturer or Furnisher, as given by Vendor.	
1891.			$ cts.			
April 9..	9359	2 bottles	0 70	N. Landry, Albert St., Hull, P.Q.	H. N. Bate & Sons, Ottawa.	Draught ....
do 15..	9366	2 do .	0 90	A. Beauregard, St. Simon St., St. Hyacinthe.	O. Brodeur, St. Hyacinthe.	do ....
do 16..	9370	2 do .	1 20	F. Carrièrre & Fils, 24 King St., Sherbrooke.	D. McMavamy & Co., Sherbrooke.	Case...... ....
do 17..	9371	2 do .	0 50	N. Chouinard, 155 Bridge St., Quebec.	Bottled by vendor.....	....
do 17..	9372	2 do .	0 60	E. Sylvain, 120 Bridge St., Quebec.	Langlois & Paradis ...	Bottled by vendor .....
do 17..	9377	2 do .	1 40	F. X. Soucey, Champlain Market Place, Quebec.	A. Toussaint & Co., Quebec.	Case................ ....
do 22..	9380	2 do .	0 75	J. Champagne, 290 St. Lawrence St., Montreal.	Mathiew Frères, Montreal.	Draught . ...
do 22..	9382	2 do .	0 70	Mrs. C. Martin, 524 Lagauchitière St., Montreal.	Dufresne & Mongenais, Montreal.	do ... ...
do 22..	9384	2 do .	0 70	E. A. Painchaud, 147½ Vitre St., Montreal.	Bottled by vendor....	....
do 22..	9388	2 do .	0 76	C. Benoit, 31½ St. Charles Baromée St., Montreal.	do	....
do 28..	9391	2 do .	0 60	T. Lemoine, 3656 Notre Dame St., St. Henri.	D. C. Brosseau & Co., Montreal.	....
May 9..	9975	2 do .	1 50	Thos. Evans, 16 Duke St., St. John, N.B.	R. Sullivan & Co., St. John, N.B.	Bourbon whiskey. Draught.
do 11..	9976	2 bottles (3 pints)	1 50	T. H. Healy, 8 Charlotte St. St. John, N.B.	D. Patton, St. John...	Draught. .. ..
do 18..	9981	do ..	2 20	C. H. Fairweather, Sussex, N.B.	Evans & Sons, Montreal.	Bourbon whiskey. Draught.
do 18..	9982	do ..	1 50	do do ..	do do ..	Draught.. ....
do 20..	9985	do ..	1 50	Moncton, N.B	D. Patton, St. John...	do ....
do 22..	9989	do ..	1 50	Shediac, N.B....... ..	Grace & Gastonquay, Halifax.	do ....
do 26..	9993	do ..	1 50	Sackville, N.B.......	Gooderham & Worts, Toronto.	do ....
Apr. 9..	10220	do ..	0 70	W. H. Maxwell, liquor merchant, 105 Queen St. W., Toronto.	Uncertain	Case...... ....
do 10..	10226	do ..	0 70	F. P. Brazill & Co., 165 King St. W., Toronto.	Gooderham & Worts, Toronto.	do .. ..
do 13..	10229	2½ pints.	0 75	H. Crozier, Queen's Hotel, Orangeville.	J. E. Seagram, Waterloo, Ont.	Draught..... ....
do 13..	10230	2 bottles (3 pints)	1 50	J. Longeway, liquor merchant, Orangeville	F. Smith & Co., Toronto.	Case... ....
do 13..	10234	3 pints..	1 00	R. W. Tuck, Royal Hotel, Shelburne, O.	Gooderham & Worts, Toronto.	Draught.. ....
do 13..	10236	do ..	1 00	George Gillespie, Bay Horse Hotel, Shelburne, O.	J. E. Seagram, Waterloo, Ont.	do ....

Samples of Distilled Liquors—*Continued.*

RYE WHISKEY.

Results of Analysis.								Remarks.
Specific Gravity of Sample at 15.5° C.	Sp. Gr. of Alcoholic Distillate at same Volume and Temp.	Difference.	Fixed Matter—Grammes per Litre.	Alcohol, per cent. by Weight.	Alcohol, per cent. by Volume.	Proof Spirit, p.c.	Serial Number.	
·9585	·9570	·0015	0·948	30·43	36·72	64·34	1	
·9502	·9487	·0015	1·380	35·06	41·98	73·56	2	
·9524	·9502	·0022	3·208	34·36	41·22	72·24	3	
·9559	·9546	·0013	0·724	31·85	38·36	67·22	4	
·9578	·9566	·0012	1·560	30·63	36·96	64·76	5	
·9488	·9441	·0047	10·412	37·42	44·72	78·26	6	
·9615	·9610	·0005	1·436	27·89	33·78	59·20	7	
·9622	·9616	·0006	0·652	27·49	33·32	58.38	8	
·9606	.9597	.0009	1·928	28·72	34·74	60·90	9	
·9621	·9615	·0006	1·112	27·56	33·40	58·54	10	
·9660	·9650	·0010	1·204	25·14	30·60	53·64	11	
·9347	·9339	·0008	1·376	42·76	50·34	88·21	12	Highest alcohol.
·9453	·9441	·0012	1·608	37·56	44·72	78·26	13	
·9496	·9487	·0009	1·276	35·08	41·98	73·56	14	Analysis by Mr. Babington.
·9686	·9676	·0010	0.756	23·08	28·18	49·38	15	do do
·9509	·9502	·0007	1·228	34·41	41·22	72·24	16	
·9476	·9463	·0013	1·120	36·34	43·38	76·00	17	
·9495	·9488	·0007	1·492	35·10	41·98	73·56	18	do do
·9691	·9681	·0010	0·964	22·77	27·80	48·70	19	Lowest alcoholic strength.
·9546	·9540	·0006	2·004	32·24	38·78	67·95	20	
·9488	·9480	·0008	0·900	35·45	42·38	74·24	21	
·9529	·9484	·0045	12·244	35·14	42·18	73·92	22	Highest solid residue.
·9517	·9502	·0015	0·308	34·38	41·22	72·23	23	Lowest do
·9550	·9540	·0010	0·940	32·22	38·78	67·96	24	

RESULTS of Examination of

TABLE II—

Date of Collection	No. of Sample.	Quantity Purchased.	Cost.	Name and Address of		Remarks regarding Sample.
				Vendor.	Manufacturer or Furnisher, as given by Vendor.	
1891.			$ cts.			
Apr. 16..	9369	2 bottles	1 50	Fortier & Therrien, Bridge St., Sherbrooke, P.Q.	Not known..	Blended by vendor, who says it is a mixture of rye and rum.
do 17..	9375	2 do ..	2 00	H. Derome, Finlay Market Place, Quebec	do	Bought from a captain on board ship, name unknown. Draught.
do 22..	9386	2 do ..	1 50	A. Clark, 623 Craig St., Montreal.	James Guest & Co., Montreal.	Draught...... ....
May 11..	9978	2 qt. bts.	1 75	J. Horne & Co., 12 Water St., St. John, N.B.	do ..	do .. . .
Apr. 9..	10219	3 pints..	1 50	W. H. Maxwell, 105 Queen St. W., Toronto.	Uncertain	Case... ....
do 15..	10244	3 do ..	2 25	J. W. Ray, Queen's Hotel, Oshawa, Ont.	R. H. Howard, Toronto.	Taken from draught ....
do 16..	10250	2½ pints.	0 85	A. M. Spafford, liquor merchant, Trenton, Ont.	Vendor	do ....
do 17..	10258	2 bottles	2 00	W. J. McHenry & Bros., liquor merchants, Brockville.	T. Carter, Kingston, Jamaica.	Case.. ... .
do 14..	10486	3 pints..	1 90	W. M. Milligan, Woodstock, Ont.	Dent, Woodstock, Ont.	Draught..... ....
June 8..	10675	3 do ..	0 90	Chas. Robinson, Halifax, N.S.	A. McDougall & Co., Halifax, N.S.	do ....
do 24 .	10690	2 bottles	1 60	John Stapleton, Port Hawkesbury, N.S.	O. Mullin & Co., Halifax, N.S.	do ....
do 27..	10703	2 do .	2 00	A. C. Bell, New Glasgow, N.S.	Kenneth Campbell & Co., Montreal.	do ... .
May 11..	11512	2 do .	1 50	Rousseau & Durand, Platon St., Three Rivers, P.Q.	Dufresne & Mongenais, Montreal.	do ....
				Artificial; prepared in the laboratory from patent still spirit and flavouring.		

Samples of Distilled Liquors—*Continued.*

RUM.

Results of Analysis.										
Specific Gravity of Sample at 15·5° C.	Sp. Gr. of Alcoholic Distillate at same Volume and Temp.	Difference.	Fixed Matter Dry at 100°C—Grammes per Litre.	Alcohol, per cent. by Weight.	Alcohol, per cent. by Volume.	Proof Spirit, p.c.	Opalescence on Diluting Distillate, 1:2 Vols.	Furfurol Reaction.	Serial Number.	Remarks.
·9340	·9302	·0038	·7048	44·35	52·18	91·42	Very slight.	Distinct	1	
·8954	·8899	·0055	11·904	62·01	69·94	122·58	Slight	Faint...	2	Highest solids. Stronger opalescence not obtainable by further dilution.
·9369	·9347	·0022	4·536	42·33	49·96	87·54	do	do ..	3	
·9171	·9151	·0020	4·176	51·22	59·16	103·68	Distinct.	do ..	4	
·9376	·9366	·0010	3·540	41·45	48·96	85·80	Very slight.	do ..	5	
·8772	·8751	·0021	7·872	68·60	75·80	132·83	Distinct.	do ..	6	Highest spirit strength.
·9445	·9427	·0018	2·768	38·33	45·60	80·00	None.	None ..	7	
·9323	·9293	·0030	6·768	44·81	52·62	92·22	Distinct.	Faint...	8	
·8953	·8950	·0003	5·064	60·22	67 94	119·06	Very slight.	Distinct	9	Stronger opalescenee notobtained by further dilution.
·9591	·9585	·0006	2·160	29·48	35·62	62·44	Distinct.	Faint...	10	Lowest in alcohol and in solids.
·9576	·9557	·0019	2·900	31·13	37·56	65·82	do	Distinct	11	
·9314	·9301	·0013	2·916	44·53	52·26	91·58	do	Faint...	12	
·9361	·9343	·0018	3·308	42·54	50·14	87·88	do	do ..	13	
·9544	·9517	·0027	10·604	33·67	40·48	70 94	None.	None ..	14	

BULLETIN No. 27.—DISTILLED LIQUORS.

E. Miall, Esq.,
Commissioner of Inland Revenue.

Sir,—It is a popular impression that many of the spirituous liquors offered for sale in Canada are more or less adulterated. When engaged in collecting food samples for analysis the inspectors connected with this branch are not unfrequently asked why they do not take samples at liquor stores, where, it is assumed, the mixing or "drugging" of liquors is carried on, and is much more injurious to the public health than are the falsifications of ordinary groceries or food stuffs. The same idea is sometimes mentioned in the newspapers, as the following extract from a recent issue of *La Presse* will show. Referring to spirituous liquors generally it says:—"Toutes ces liqueurs, plus ou moins mauvaises pour la santé de ceux qui en consomment quelques coups par jour, sont pernicieuses au plus haut degré pour ceux qui en abusent, et cela quand ces liqueurs sont de bonne fabrication et de source naturelle. Que sera cet empoisonnement, si ces mêmes liqueurs, pour la concurrence commerciale et pour atteindre le bon marché relatif, sont fabriquées de toutes pièces par un simple mélange d'alcool et d'eau, et de teintures avec essences et huiles diverses. C'est là, souvent, le genre simple des liquides absorbés à bon marché."

Not only is it believed that liquors are thus falsified, but it is maintained that the adulterants present in alcoholic beverages often produce worse effects than the alcohol itself. The Rev. Father McCallen, of St. Patrick's Church, Montreal, spoke as follows at a temperance convention held there on the 1st October, 1890:—"If a butcher sold tainted meat, a druggist compounded an injurious prescription, a baker adulterated his food products, they were pounced upon by the law; but those who send men to their homes intellectual, physical and moral wrecks, through the sale of adulterated beverages, which so quickly affect the brain, shatter the health, bring disease to the body and create an irresistible craving in the drunkard for still greater potations, did so with an impunity which is simply appalling to contemplate." In addition to this, it has been plainly stated that no returns have been made by the officers of the Government with regard to any analysis of intoxicating liquors. Mr. J. J. Curran, member for Montreal Centre, said in Parliament: "I believe that the officers of the Government are being instructed to analyse liquors issued from compounderies and distilleries, but I am not aware any such steps have been taken with regard to places where liquors are sold by retail." The Hon. the Minister of Inland Revenue was able at once to correct this mistake, and said: "When my hon. friend says that while analyses have been made of different items of food and drugs, none have been made of liquors, he is not, perhaps, aware that officers in the Chief Analyst's Branch of the Department have collected very large numbers of samples in different cities throughout the Dominion, with the view of ascertaining the condition of the liquors sold by retailers." I have thought it necessary to call your attention to these facts as a justification for addressing to you the following report on distilled liquors, and requesting that you will cause the same to be published in the Bulletin series, in order that the public may understand the exact position of this branch of the Department with reference to the alleged adulteration of the liquors in question.

If reference is made to the reports on the adulteration of food which have been published by the Department, it will be seen that the number of samples of distilled and malt liquors, wines, liqueurs and cordials collected and analysed since 1883 has been as follows:—

Year ending	Total No. of Samples Collected and Examined.	No. Found to be Adulterated	No. Found Doubtful.	No. Found to be Unadulterated.
June 30th, 1883	46	8	1	37
do 1884	113	9	3	101
do 1885	85	19	7	59
do 1886	210	31	3	176
do 1887	50	6	2	42
do 1888	164	23	10	131
do 1889	12	6	0	6
Total	680	102	26	552

All these samples were collected from retail dealers. In general it may be remarked that the adulterations detected consisted for the most part of dilution by water, and the addition of colouring substances not injurious to health. None of the substances enumerated in the first schedule of the Adulteration Act were found in any of the samples, with the exception of occasional traces of amyl-alcohol (fusel oil). Diligent search for methyl-alcohol (from the possible addition of methylated spirit) failed to discover any.

The liquors sold under the names brandy, rum, gin, whiskey, &c., have been found, when samples of each class were compared with each other, to vary considerably as regards alcoholic strength. Nevertheless, it was not found practicable to institute prosecutions for the sale of liquors deficient in alcohol, because in all such instances they had not been offered for sale under any professed standard, and because there is no legal standard of strength yet established for these liquors in Canada. No doubt section 19 of the Adulteration Act gives the Governor in Council power to establish such standards, but this has not yet been acted upon.

In the course of the discharge of their duties, the officers of this branch have become aware that, among the various brands of distilled liquors offered for sale in Canada, there are many of a spurious character, not derived from the source indicated by their names, and, in fact, as stated in the newspaper extract above quoted, made up of alcohol, water and other materials. It was, however, found to be a difficult matter to distinguish the factitious from the genuine article, and no attempt in this direction appears to have been made by any of the public analysts. In fact, the existence of this sort of manufacture has long been known to and recognized by the Inland Revenue Department, but it is only recently that the various ethers, essences and oils used in the production of spurious brandy, rum, gin, whiskey, &c., have been publicly offered for sale. This branch is, however, not yet in possession of any information to show that advantage has been taken of these facilities by retailers, to any very large extent, to manufacture brandies, &c., on their own premises.

In order to prosecute further the examination of these liquors, instructions were issued by yourself in the month of April last to the food inspectors for the collection of 180 samples of distilled liquors, which were obtained at the places indicated in the following list:—

Place.	High Wines.	Brandy.	Rum.	Gin.	Whiskey.				Total.
					Scotch.	Irish.	Malt.	Rye.	
Halifax, N.S	....	1	1	1	1	....	....	4	8
Truro, N.S	....	1	....	....	....	....	....	2	3
Pictou, N.S	....	1	....	....	1	....	....	1	3
Port Mulgrave	....	....	....	....	....	....	....	1	1
Port Hawkesbury	....	....	1	....	1	....	....	....	2
North Sydney	....	....	....	1	2	....	....	2	5
Sydney	....	1	....	....	....	....	....	1	2
Antigonish	....	1	....	....	2	....	....	....	3
New Glasgow	....	....	1	....	1	....	....	1	3
St. John, N.B	....	1	1	1	2	2	....	2	9
Sussex, N.B	....	1	....	....	....	....	....	2	3
Moncton, N.B	....	1	....	....	1	1	....	1	4
Shediac, N.B	....	1	....	....	1	....	....	1	3
Sackville, N.B	....	....	....	1	1	1	....	1	4
Quebec	1	....	1	1	....	3	3	....	9
St. Hyacinthe	....	1	....	....	....	....	2	1	4
Sherbrooke	....	....	1	....	....	....	1	1	3
Three Rivers	....	....	1	....	1	....	1	1	4
St. Joliette	....	1	....	....	....	....	1	1	3
Montreal	....	1	1	1	1	....	2	4	10
Lachute, P.Q	....	....	....	1	....	....	2	....	3
Hull, P.Q	....	1	....	1	....	....	2	1	5
St. Henri	....	....	....	1	....	....	2	1	4
Valleyfield	....	1	....	....	....	....	1	1	3
Huntingdon	1	....	....	....	....	....	1	1	3
St. Jérome	....	1	....	....	....	....	1	1	3
Ottawa	....	1	....	1	2	1	....	4	9
Trenton, Ont	....	....	1	....	....	1	1	1	4
Kingston	....	1	....	1	....	....	1	2	5
Brockville	....	....	1	....	1	1	....	2	5
Toronto	....	....	1	1	1	1	2	3	9
Orangeville	....	1	....	....	1	1	....	2	5
Shelburne	....	....	....	....	....	....	1	2	3
Brampton	1	....	....	1	....	....	1	1	4
Oshawa	....	....	1	....	1	....	1	....	3
Port Hope	1	1	....	....	....	1	....	....	3
Clinton	....	1	....	....	....	....	1	1	3
Woodstock	....	1	1	1	....	....	....	2	5
Norwich	....	....	....	1	....	....	1	1	3
Simcoe	....	1	....	....	....	....	1	2	4
Glencoe	....	....	....	1	....	....	1	2	4
Lucan	....	1	....	....	....	....	1	2	4
Total	4	23	13	16	21	13	31	59	180

These 180 samples were submitted to the various district analysts, and the duplicates, as required by law, forwarded to the Department. The reports of the analysts were all of the same character as in the former examinations of such liquors referred to above. On the other hand, the duplicate samples, along with some others specially selected, were subjected to a much more minute examination than usual, in this laboratory, one of the objects being if possible to detect any of the samples which might be of artificial origin. The tables hereto attached, Nos. I to VIII, give a description of the various samples, and form part and portion of the report, also hereto attached, of Mr. A. McGill, B.A., &c., Assistant Analyst to the Chief Analyst, who carried out the examinations.

I have to recommend this report to your attentive perusal, but I must also point out several of the results of it as worthy of special notice, and make some general remarks regarding each class of liquor described, with the view of arriving at proper definitions and legal standards for each, without which the administration of the Adulteration Act, so far as regards distilled liquors, will be impossible. For the various statements made and figures given I might give the authority, but I do not consider it necessary to burden this report with too many quotations.

Brandy.—The 24 samples varied in alcohol contents from 59·16 to 33·40 per cent by volume, or from 3·63 per cent over proof to 41·47 per cent under proof. Brandy imported in wood is usually understood by the trade to be 4 o. p.; in bottle it is commonly 15 u. p. This is equal to 85 per cent of proof spirit, or 48·54 per cent by volume of alcohol. Exactly one-half of the samples are below this limit, and their vendors would have been liable to prosecution had it been legally established as the lowest saleable percentage. On the other hand, if the English lowest limit of 25 u. p., or 75 per cent proof spirit, or 42·84 per cent by volume of alcohol, had been legalized in this country, then there would have been only three cases for prosecution, or 12·5 per cent of the samples collected. With reference to the amount of extract, "total solids," "dry substance." or, as it is called in the tables, "fixed matter dried at 100° C.", it is usually supposed that a brandy, being a distillate, should not contain more dry substance than it is capable of dissolving from the cask in which it is stored. According to Clifford Richardson, strong whiskey (with 43 per cent alcohol) after six months' storage in casks shows 0·0337 per cent of dry substance. This is the average of 8 samples, and the amount, after storage for four or five years, does not exceed 0·2 per cent. According to X. Rocques, (Bull. chim. 50, 157 ; 1888) the extract in 3 samples of genuine cognac (Chateau des Andreaux, Charente,) were as follows:—

Cognac, 1875	1·30	grammes per litre.
do 1848	3·30	do
do 1836	4·90	do

Assuming 2 grammes per litre as the maximum extract in a genuine, 8 year old, cognac, it follows that only 3 out of the 24 samples examined came up to this standard, and it becomes plain that what are usually considered the best qualities of brandy receive artificial additions for colouring or other purposes after distillation. Among these probably the least harmful are small quantities of syrup, the use of which is admitted by the manufacturers. Nevertheless. the German government has decided that cognacs containing it are not pure, and can only be imported on payment of a higher rate of duty. Additions are no doubt also frequent of alcohol which has not been produced from wine or grapes. It is notorious that large quantities of high-strength German spirit are imported into France for mixing with brandy, and even for making artificial imitations of it. Statistics show that the average total production of cognac by the Charente Departments does not amount to one-tenth of the quantity exported by France to foreign countries. It would, therefore, be unjust to regard all imported brandies as genuine, or as, in every case, very much better than the domestic product, some of which, as their vendors naively state, are "blended by themselves with rye whiskey." These vendors might very fairly maintain that their rye whiskey made from grain is superior to the German spirit made from potatoes. It does not seem that any of the samples examined are produced exclusively from high-grade alcohol. This conclusion is based on the results of the tests for opalescence in the distillate and for furfurol. It would not be wise, however, to place too much reliance upon the presence of the latter substance and of volatile oil or ether, because it would be an easy thing for manufacturers to add these if it became a matter of importance to them to render the detection of the adulteration impossible. In passing judgment upon the 24 samples examined it is very evident that none of them come up to the old or popular definition of brandy, namely, "ardent spirits distilled from wine without any subsequent addition." If this definition cannot be upheld, then a new one becomes necessary before the public analysts can give any reliable opinion as regards adulteration. The Select Committee of the

English House of Commons on British and foreign spirits, in their report, printed this year, call attention to this difficulty of definition, and say: "Foreign brandy consists of dilute alcohol flavoured with the bye-products of the grape, but British brandy is an imitation without these bye-products, and is made from a silent spirit." Under such circumstances, it would seem impossible for chemical analysis to render much service in the matter. It seems to be more a matter of smell and flavour, and that connoisseurs or experts experienced in these are the proper judges, and the persons to suggest a standard for brandy. Meanwhile, it would not be unreasonable to establish a lowest limit of variability for these liquors. It might also be possible to restrict their names, so that they should signify as follows:—

Cognac; made in the Charentes district and guaranteed free from admixture of foreign spirit.

Brandy; also imported from France, but without guarantee.

British Brandy; the imitations imported from England.

Canadian Brandy; imitations made in Canada.

Rum.—The strength of the 13 samples collected varies from 78.80 per cent alcohol by volume to 35·62 per cent, or from 32·82 per cent over proof to 37·51 per cent under proof. It is said to be usually imported into Canada in wood at from 32 to 42 over proof, and to be generally sold wholesale in this condition, but its value is based upon a price per gallon at 16 o. p. The latter strength corresponds to 66·21 per cent of alcohol by volume, which is somewhat higher than the French authority quoted by Mr. McGill, and, if adopted as the lowest limit, would cause 10 out of the 13 samples examined to be condemned. If the English lowest limit of 25 u. p. were adopted, which is equal to 42·84 per cent alcohol, then only 2 of the 13 would be condemned. If rum is to be regarded as a variety of ardent spirits, distilled in the West Indies from fermented sugar refuse, molasses, &c., then the amount of extract should not exceed 2 grammes per litre. But it is said that even at the place of production burnt sugar is mixed with the distillate in order to give it the desired colour. Genuine rums, according to recent analysis, vary in the amount of extract from 6·68 to 30·47 grammes per litre, which latter figure much exceeds any of the results given in Table II. It has not yet been found possible to make an accurate determination of the amount present of the peculiar ether to which rum owes its characteristic aroma, or to distinguish reliably betwixt the genuine and the adulterated article or artificial imitations. The only way in which to protect the public from the latter, at present, would seem to be so to arrange matters that no liquor could be sold as rum which was not imported direct from the country of production. It seems impossible to rely on the character of the rum imported from England, in view of the fact that the Excise authorities there allow an artificial mixture called Hamburg rum to be stored, and also to be blended in bond with the pure colonial product.

Whiskey.—In the wholesale trade of Montreal, Scotch whiskey in wood is usually imported at 11 over proof; in bottles at 15 under proof. As put on the market by Canadian distillers, it runs from 10 to 25 under proof. Taking the latter strength, 42·84 per cent alcohol by volume, which is also the legal lowest limit in England, as the lowest at which whiskey should be sold, and comparing with it all the whiskies described in Tables III, IV, V and VI, it will be found that the following are too low in alcohol:—

					Per cent.
Among 61	Rye whiskies	47	are too low	=	77
" 23	Scotch "	5	"	=	21·7
" 11	Irish "	2	"	=	18·2
" 33	White "	21	"	=	63·6
128		75	are too low	=	58·6

These figures plainly show that there is a necessity for fixing "the limits of variability" as regards whiskey by Order in Council, as provided for in the Adulteration

Act. That law also provides that "Food shall be deemed to be adulterated, within the meaning of the "Act, if it is an imitation of, or is sold under the name of another "article." But in order to prove an imitation it is necessary, in many cases, to define the original article for which it is substituted. Therefore, a legal definition of the term "whiskey," as well as of the names for other distilled liquors, is necessary before any proceedings against parties selling the spurious articles can be undertaken, unless indeed such liquors are found to contain substances injurious to health.

Hollands and Old Tom.—The strength of gin ordinarly imported into Canada in wood is about proof, and, when bottled, 20 per cent under proof. Seven of the 21 samples examined and described in Table VII and VIII are below this strength. The lowest legal limit in England is, however, only 35 u. p., or 65 per cent. proof spirit which strength is exceeded by all the samples collected. The old definition of gin is "a kind of ardent spirits manufactured in Holland from rye and malt, in rectifying which juniper berries are added to the contents of the potstill to give the peculiar flavour." According to the analysts, about one-third of the number of samples collected do not answer to this definition. As there are British brandies and British rums so it appears there are also British gins. But the analysis of the latter under the name of Old Tom would lead one to class it among the liqueurs rather than under distilled liquors.

This investigation leads generally to the following conclusions:—

1. That the opinion held by many regarding the injurious character of the substances added to spirits or distilled liquors, for various purposes, is destitute of sufficient foundation. Some of the essences, ethers, &c., used by blenders or compounders, taken by themselves, may be said to be injurious, but the quantities used are so minute in the resulting product that they cannot be considered to have any worse effect on the human system than the dilute alcohol with which they are mixed.

2. That, in very many cases, liquors are sold under the designation of brandy, rum, Scotch and Irish whiskey, and gin, which have no right to such names, on account of their being merely imitations.

3. That this Branch finds it impossible under the Adulteration Act to prevent such sale until the limits of variability have been fixed and standards established by the Governor in Council or by Parliament.

I have the honour to be, Sir,
Your obedient servant,
THOMAS MACFARLANE
Chief Analyst.

30th October, 1891.

RESULTS of Examination of

TABLE I—

Date of Collection	No. of Sample.	Quantity Purchased.	Cost.	Name and Address of Vendor.	Name and Address of Manufacturer or Furnisher, as given by Vendor.	Remarks regarding Sample.
1891.			$ cts.			
April 8..	9360	2 bottles	1 70	G. Goyette, Main St., Hull, P.Q.	H. N. Bate & Sons, Ottawa.	Taken from draught....
do 15..	9367	do .	1 50	O. Brodeur, St. Simon St., St. Hyacinthe, P.Q.	Finlayson, Hirsch & Co., Montreal.	Case...... ....
do 22..	9387	do .	2 00	Z. Larocque, 521 Craig St., Montreal.	Dufresne & Mongenais, Montreal.	Taken from draught....
May 12..	9977	do .	1 80	J. J. Power, 88 Russel St., St. John, N.B.	T. L. Bourke, St. John, N.B.	Sample from bottle as sold over bar.
do 18..	9983	do .	2 00	C. H. Fairweather, King St., Sussex, N.B.	Kenneth Campbell & Co., Montreal.	Draught..............
do 20.	9987	do .	2 50	Moncton........... .	Kelly & Glassie, Halifax, N.S.	Bottle bears the name, Vallie & Co., France.
do 22..	9990	do .	2 00	do	Grace & Gastonquay, Halifax, N.S.	Bottle bears name of Jules Lefranc.
April 15..	10247	do .	2 50	A. A. Adams, Queen's Hotel, Port Hope.	Finlayson, Hirsch & Co., Montreal.	Bottle bears name of Jules Robins & Co.
do 17..	10256	do .	2 00	T. Farrell, Liquor Merchant, Kingston, Ont.	Imported............	Bottle bears name of E. Dumas.
do 23..	10263	do .	2 00	P. O'Connor, Bank St., Ottawa.	Louis Frères & Co.....	Case......... ....
do 13..	10482	1½ qts..	1 85	Joseph Riter, Clinton, Ont.	....	Vendor states that it is blended by himself with rye whiskey.
do 14..	10488	do ..	1 75	L. A. Gunnit, Woodstock, Ont.	....	do do ..
do 16..	10494	1½ qts..	2 00	John Sutton, Simcoe, Ont.	Jas. Turner & Co., Hamilton, Ont.	Bottle has Barsac's name.
do 18..	10500	do ..	2 00	Edward Mara, Lucan, Ont.	R. H. Howard & Co., Toronto.	Bottle has name of Jules Robins.
June 8..	10677	3 pints .	1 50	J. T. Sullivan, Halifax, N.S.	A. McDougall & Co., Halifax.	Bottle has name of Hennessey. Draught.
do 22..	10683	2 bottles	1 50	J. C. Mahon, Truro, N.S.	Besquit & Bouche....	Draught.... ....
do 23..	10686	do .	1 50	Chas. L. Rood, Pictou, N.S.	Meagher Bros. & Co., Montreal.	Bottle labelled "Dufaure Frères."
do 25..	10697	do .	2 00	Chas. Ross, Sydney, C.B.	Grace & Gastonquay, Halifax, N.S.	Labelled Jules Lefranc & Cie.
do 26..	10700	do .	2 50	J. D. Copeland, Antigonish.	Lucien Bellot & Co....	Case....... ....
May 4..	11503	do .	2 00	Viau Frère, Market Hotel, Valleyfield, P.Q.	E. H. Hebert, Valleyfield.	Draught...... ....
do 12..	11514	do .	1 60	Joshep Rivard, Notre Dame St., Joliette, P.Q.	Not known...........	do ....
do 13..	11517	do .	1 60	J. M. Richard & Co., St. Jerôme, P.Q.	Bottled by Vendor....	.. . .
April 2..	A.	do .	......	Bate & Co., Ottawa. ..	Hennessey's V.O. Cognac.	Case............ ......
Mar. 28..	B.	do .	4 00	Dufresne & Mongenais, Montreal.	....	Labelled "Champagne Cognac, 1858."
....	C.	. ...	......	Prepared in laboratory	....	....

Samples of Distilled Liquors.

BRANDY.

Results of Analysis.										
Specific Gravity of Sample at 15·5°C.	Sp. Gr. of Alcoholic Distillate at same Volume and Temp.	Difference.	Fixed Matter Dry at 100°C—Grammes per Litre.	Alcohol, per cent. by Weight.	Alcohol, per cent. by Volume.	Proof Spirit, p.c.	Opalescence on Diluting Distillate, 1 : 2 Vols.	Furfurol Reaction.	Serial Number.	Remarks.
·9377	·9343	·0034	8·388	42·45	50·14	87·90	None.	Distinct	1	Probably factitious.
·9476	·9438	·0038	8·480	37·63	44·92	78·70	do .	do .	2	
·9642	·9615	·0027	5·844	27·51	33·40	58·54	Slight	Faint...	3	Lowest alcohol strength.
·9467	·9444	·0023	5·392	37·34	44·54	78·06	do .	Distinct	4	Analysis by Mr. Babington.
·9332	·9301	·0031	10·576	44·60	52·44	91·90	do .	do .	5	do do
·9501	·9491	·0010	0·952	34·90	41·78	73·20	None.	do .	6	Lowest solids.
·9193	·9152	·0041	9·024	51·10	59·16	103·68	Slight	Faint...	7	Highest alcohol strength.
·9353	·9289	·0064	16·784	44·83	52·80	92·54	do .	do ..	8	Compare with 10500.
·9584	·9568	·0016	1·620	30·51	36·84	64·60	None.	do ..	9	
·9409	·9381	·0028	5·104	40·64	48·16	84·40	do .	do ..	10	
·9471	·9455	·0016	2·504	36·79	43·90	76·92	do .	do ..	11	
·9355	·9339	·0016	4·016	42·81	50·14	87·88	do .	do ..	12	Analysis by Mr. Babington.
·9408	·9403	·0005	1·128	39·63	46·96	82·30	None.	Distinct	13	do do
·9204	·9151	·0053	16·648	51·03	59·16	103·68	Slight	do .	14	
·9581	·9543	·0038	8·012	31·96	38·56	67·58	do .	do .	15	
·9334	·9278	·0056	12·348	45·38	53·34	93·50	do .	Faint...	16	
·9442	·9399	·0043	8·692	39·65	47·16	82·66	Distinct.	do ..	17	
·9473	·9438	·0035	7·688	37·64	44·92	78·70	do .	Distinct	18	
9373	·9318	·0055	13·092	43·56	51·42	90·14	Very slight.	do .	19	
·9278	·9214	·0064	17·924	48·22	56·36	98·76	do .	Faint...	20	Highest solids.
·9423	·9392	·0031	10·432	40·08	47·56	83·36	Slight	do ..	21	
·9464	·9420	·0044	10·028	38·60	46·02	80·64	Distinct.	Distinct	22	
·9367	·9339	·0028	9·180	42·66	50·34	88·20	do .	do .	23	
·9395	·9339	·0056	16·654	42·54	50·34	88·20	Slight	do .	24	
·9311	·9305	·0006	3·872	44·40	52·08	91·26	None.	None...	25	Analysis by Mr. Babington.

RESULTS of Examination of

TABLE II—

Date of Collection	No. of Sample.	Quantity Purchased.	Cost.	Name and Address of		Remarks regarding Sample.
				Vendor.	Manufacturer or Furnisher, as given by Vendor.	
1891.			$ cts.			
Apr. 16..	9369	2 bottles	1 50	Fortier & Therrien, Bridge St., Sherbrooke, P.Q.	Not known..	Blended by vendor, who says it is a mixture of rye and rum.
do 17..	9375	2 do ..	2 00	H. Derome, Finlay Market Place, Quebec	do	Bought from a captain on board ship, name unknown. Draught.
do 22..	9386	2 do ..	1 50	A. Clark, 623 Craig St., Montreal.	James Guest & Co., Montreal.	Draught...... ....
May 11..	9978	2 qt. bts.	1 75	J. Horne & Co., 12 Water St., St. John, N.B.	do ..	do .. ..
Apr. 9..	10219	3 pints..	1 50	W. H. Maxwell, 105 Queen St. W., Toronto.	Uncertain	Case.. ....
do 15..	10244	3 do ..	2 25	J. W. Ray, Queen's Hotel, Oshawa, Ont.	R. H. Howard, Toronto.	Taken from draught ....
do 16..	10250	2½ pints.	0 85	A. M. Spafford, liquor merchant, Trenton, Ont.	Vendor	do ....
do 17..	10258	2 bottles	2 00	W. J. McHenry & Bros., liquor merchants, Brockville.	T. Carter, Kingston, Jamaica.	Case.. ... .
do 14..	10486	3 pints..	1 90	W. M. Milligan, Woodstock, Ont.	Dent, Woodstock, Ont.	Draught...... ....
June 8..	10675	3 do ..	0 90	Chas. Robinson, Halifax, N.S.	A. McDougall & Co., Halifax, N.S.	do ....
do 24 .	10690	2 bottles	1 60	John Stapleton, Port Hawkesbury, N.S.	O. Mullin & Co., Halifax, N.S.	do ... .
do 27..	10703	2 do .	2 00	A. C. Bell, New Glasgow, N.S.	Kenneth Campbell & Co., Montreal.	do ....
May 11..	11512	2 do .	1 50	Rousseau & Durand, Platon St., Three Rivers, P.Q.	Dufresne & Mongenais, Montreal.	do ....
				Artificial; prepared in the laboratory from patent still spirit and flavouring.		

Samples of Distilled Liquors—*Continued.*

RUM.

Results of Analysis.										
Specific Gravity of Sample at 15·5° C.	Sp. Gr. of Alcoholic Distillate at same Volume and Temp.	Difference.	Fixed Matter Dry at 100°C—Grammes per Litre.	Alcohol, per cent. by Weight.	Alcohol, per cent. by Volume.	Proof Spirit, p.c.	Opalescence on Diluting Distillate, 1:2 Vols.	Furfurol Reaction.	Serial Number.	Remarks.
·9340	·9302	·0038	·7048	44·35	52·18	91·42	Very slight.	Distinct	1	
·8954	·8899	·0055	11·904	62·01	69·94	122·58	Slight	Faint...	2	Highest solids. Stronger opalescence not obtainable by further dilution.
·9369	·9347	·0022	4·536	42·33	49·96	87·54	do	do ..	3	
·9171	·9151	·0020	4·176	51·22	59·16	103·68	Distinct.	do ..	4	
·9376	·9366	·0010	3·540	41·45	48·96	85·80	Very slight.	do ..	5	
·8772	·8751	·0021	7·872	68·60	75·80	132·83	Distinct.	do ..	6	Highest spirit strength.
·9445	·9427	·0018	2·768	38·33	45·60	80·00	None.	None ..	7	
·9323	·9293	·0030	6·768	44·81	52·62	92·22	Distinct.	Faint...	8	
·8953	·8950	·0003	5·064	60·22	67 94	119·06	Very slight.	Distinct	9	Stronger opalescenee not obtained by further dilution.
·9591	·9585	·0006	2·160	29·48	35·62	62·44	Distinct.	Faint...	10	Lowest in alcohol and in solids.
·9576	·9557	·0019	2·900	31·13	37·56	65·82	do	Distinct	11	
·9314	·9301	·0013	2·916	44·53	52·26	91·58	do	Faint...	12	
·9361	·9343	·0018	3·308	42·54	50·14	87·88	do	do ..	13	
·9544	·9517	·0027	10·604	33·67	40·48	70·94	None.	None ..	14	

RESULTS of Examination of

TABLE III—

Date of Collection	No. of Sample.	Quantity Purchased.	Cost.	Name and Address of		Remarks regarding Sample.
				Vendor.	Manufacturer or Furnisher, as given by Vendor.	
1891.			$ cts.			
April 9..	9359	2 bottles	0 70	N. Landry, Albert St., Hull, P.Q.	H. N. Bate & Sons, Ottawa.	Draught
do 15..	9366	2 do .	0 90	A. Beauregard, St. Simon St., St. Hyacinthe.	O. Brodeur, St. Hyacinthe.	do
do 16..	9370	2 do .	1 20	F. Carrièrre & Fils, 24 King St., Sherbrooke.	D. McMavamy & Co., Sherbrooke.	Case
do 17..	9371	2 do .	0 50	N. Chouinard, 155 Bridge St., Quebec.	Bottled by vendor	
do 17..	9372	2 do .	0 60	E. Sylvain, 120 Bridge St., Quebec.	Langlois & Paradis	Bottled by vendor
do 17..	9377	2 do .	1 40	F. X. Soucey, Champlain Market Place, Quebec.	A. Toussaint & Co., Quebec.	Case
do 22..	9380	2 do .	0 75	J. Champagne, 290 St. Lawrence St., Montreal.	Mathiew Frères, Montreal.	Draught
do 22..	9382	2 do .	0 70	Mrs. C. Martin, 524 Lagauchitière St., Montreal.	Dufresne & Mongenais, Montreal.	do
do 22..	9384	2 do .	0 70	E. A. Painchaud, 147½ Vitre St., Montreal.	Bottled by vendor.	
do 22..	9388	2 do .	0 76	C. Benoit, 31½ St. Charles Baromée St., Montreal.	do	
do 28..	9391	2 do .	0 60	T. Lemoine, 3656 Notre Dame St., St. Henri.	D. C. Brosseau & Co., Montreal.	
May 9..	9975	2 do .	1 50	Thos. Evans, 16 Duke St., St. John, N.B.	R. Sullivan & Co., St. John, N.B.	Bourbon whiskey. Draught.
do 11..	9976	2 bottles (3 pints)	1 50	T. H. Healy, 8 Charlotte St. St. John, N.B.	D. Patton, St. John	Draught.
do 18..	9981	do ..	2 20	C. H. Fairweather, Sussex, N.B.	Evans & Sons, Montreal.	Bourbon whiskey. Draught.
do 18..	9982	do ..	1 50	do do ..	do do ..	Draught.
do 20..	9985	do ..	1 50	Moncton, N.B	D. Patton, St. John	do
do 22..	9989	do ..	1 50	Shediac, N.B	Grace & Gastonquay, Halifax.	do
do 26..	9993	do ..	1 50	Sackville, N.B	Gooderham & Worts, Toronto.	do
Apr. 9..	10220	do ..	0 70	W. H. Maxwell, liquor merchant, 105 Queen St. W., Toronto.	Uncertain	Case
do 10..	10226	do ..	0 70	F. P. Brazill & Co., 165 King St. W., Toronto.	Gooderham & Worts, Toronto.	do ..
do 13..	10229	2½ pints.	0 75	H. Crozier, Queen's Hotel, Orangeville.	J. E. Seagram, Waterloo, Ont.	Draught
do 13..	10230	2 bottles (3 pints)	1 50	J. Longeway, liquor merchant, Orangeville	F. Smith & Co., Toronto.	Case
do 13..	10234	3 pints..	1 00	R. W. Tuck, Royal Hotel, Shelburne, O.	Gooderham & Worts, Toronto.	Draught.
do 13..	10236	do ..	1 00	George Gillespie, Bay Horse Hotel, Shelburne, O.	J. E. Seagram, Waterloo, Ont.	do

Samples of Distilled Liquors—*Continued.*

RYE WHISKEY.

Results of Analysis.								
Specific Gravity of Sample at 15.5° C.	Sp. Gr. of Alcoholic Distillate at same Volume and Temp.	Difference.	Fixed Matter—Grammes per Litre.	Alcohol, per cent. by Weight.	Alcohol, per cent. by Volume.	Proof Spirit, p.c.	Serial Number.	Remarks.
·9585	·9570	·0015	0·948	30·43	36·72	64·34	1	
·9502	·9487	·0015	1·380	35·06	41·98	73·56	2	
·9524	·9502	·0022	3·208	34·36	41·22	72·24	3	
·9559	·9546	·0013	0·724	31·85	38·36	67·22	4	
·9578	·9566	·0012	1·560	30·63	36·96	64·76	5	
·9488	·9441	·0047	10·412	37·42	44·72	78·26	6	
·9615	·9610	·0005	1·436	27·89	33·78	59·20	7	
·9622	·9616	·0006	0·652	27·49	33·32	58.38	8	
·9606	.9597	.0009	1·928	28·72	34·74	60·90	9	
·9621	·9615	·0006	1·112	27·56	33·40	58·54	10	
·9660	·9650	·0010	1·204	25·14	30·60	53·64	11	
·9347	·9339	·0008	1·376	42·76	50·34	88·21	12	Highest alcohol.
·9453	·9441	·0012	1·608	37·56	44·72	78·26	13	
·9496	·9487	·0009	1·276	35·08	41·98	73·56	14	Analysis by Mr. Babington.
·9686	·9676	·0010	0.756	23·08	28·18	49·38	15	do do
·9509	·9502	·0007	1·228	34·41	41·22	72·24	16	
·9476	·9463	·0013	1·120	36·34	43·38	76·00	17	
·9495	·9488	·0007	1·492	35·10	41·98	73·56	18	do do
·9691	·9681	·0010	0·964	22·77	27·80	48·70	19	Lowest alcoholic strength.
·9546	·9540	·0006	2·004	32·24	38·78	67·95	20	
·9488	·9480	·0008	0·900	35·45	42·38	74·24	21	
·9529	·9484	·0045	12·244	35·14	42·18	73·92	22	Highest solid residue.
·9517	·9502	·0015	0·308	34·38	41·22	72·23	23	Lowest do
·9550	·9540	·0010	0·940	32·22	38·78	67·96	24	

Results of Examination of

TABLE III.—

Date of Collection	Number of Sample.	Quantity Purchased.	Cost.	Name and Address of		Remarks regarding Sample.
				Vendor.	Manufacturer or Furnisher, as given by Vendor.	
1891.			$ cts.			
April 14..	10242	3 pints..	0 90	Chas. Kenny, Queen's Hotel, Brampton.	J. E. Seagram, Waterloo.	Draught.
do 16..	10252	2 bottles (3 pints)	3 00	F. Stortz, St. Lawrence Hall, Trenton.	Adams & Burns, Toronto.	Brand, Ancient whiskey, case.
do 17..	10253	do ..	0 90	J. McParland, liquor merchant, Kingston, Ont.	Gooderham & Worts, Toronto.	Case.
do 17..	10257	2½ pints.	1 00	J. E. Dunham, British American Hotel, Kingston.	Messrs. Walker & Sons, Walkerville, Ont.	Draught
do 18..	10261	3 pints..	1 00	Mr. McGlades, McGlades' Hotel, Brockville.	Messrs. Wiser & Sons, Prescott.	Taken from jar behind the bar.
do 18..	10262	do ..	1 00	A. Wendling, Clifton Hotel, Brockville.	Not known..	do ..
do 23..	10266	2 bottles	0 70	H. Quinn, liquor merchant, Rideau St., Ottawa.	do	Case.
do 23..	10268	3 pints..	1 10	P. Baskerville & Bros., liquor merchants, Ottawa.	Gooderham & Worts, Toronto.	Draught
do 23..	10270	do ..	1 00	M. Quinn, Revere House, Sussex St., Ottawa.	do ..	do
do 23..	10271	2 bottles	1 60	C. Perron, hotel, Clarence St., Ottawa.	H. Corby, Belleville..	Case.
do 13..	10481	3 pints..	1 00	Richard Bell, Clinton, Ont.	G. B. Smith, London, Ont.	Draught.
do 14..	10487	do ..	1 00	Wm. Rea, Woodstock, Ont.	L. A. Gunnit	Sold as Walker's whiskey.
April 15..	10489	3 pints..	0 90	W. J. Coker, Norwich, Ont.	J. S. Hamilton, Brantford, Ont.	Draught
do 16..	10492	do ..	1 00	J. H. Cutting, Simcoe, Ont.	J. Turner & Co., Hamilton.	do
do 16..	10495	do ..	0 75	John Sutton, Simcoe, Ont.	do ..	Shipped direct from Walkerville as Walker's pure rye whiskey. Draught.
do 17..	10496	do ..	1 00	Samuel Hart, Glencoe, Ont.	John Garvey, London, Ont.	do ..
do 17..	10498	do ..	1 00	W. H. Simpson, Glencoe, Ont.	Nesbet Bros., Montreal.	Draught.
do 18..	10501	do ..	1 00	Edward Mara, Lucan, Ont.	E. Adams & Co., London.	Walker's. Draught
do 18..	10503	do ..	1 00	Ralph O'Neill, Lucan, Ont.	Adams & Burns, Toronto.	Draught.
June 9..	10679	do ..	0 90	John Mullane, Halifax, N.S.	McDougall's Distilling Co., Halifax.	do
do 9..	10680	2 bottles	1 70	C. A. W. Coin, Halifax, N.S.	Kelly & Glassie, Halifax.	Bourbon whiskey. Draught.
do 9..	10681	do ..	1 20	R. N. McDonald, Halifax, N.S.	Finlayson, Hirsch & Co., Montreal.	"Jubilee" brand, warranted 6 years old. Draught.
do 10..	10682	do ..	1 00	James Yetman, Halifax, N.S.	A. C. McDougall & Co., Halifax.	Draught
do 22..	10684	do ..	1 20	J. C. Mahon, Truro, N.S.	do ..	Old rye. Draught.

Samples of Distilled Liquors—*Continued.*

RYE WHISKEY—*Continued.*

RESULTS OF ANALYSIS.								Remarks.
Specific Gravity of Sample at 15·5° C.	Sp. Gr. of Alcoholic Distillate at same Vol. and Temp.	Difference.	Fixed Matter—Grammes per Litre.	Alcohol, per cent. by Weight.	Alcohol, per cent. by Volume.	Proof Spirit, p.c.	Serial Number.	
·9554	·9543	·0011	1·016	32·05	38 54	67·56	25	
·9456	·9432	·0024	5·680	39·68	45·28	79·36	26	
·9538	·9526	·0012	1·600	30·07	39·74	69 64	27	
.9536	·9525	·0011	1·224	33·15	39·84	69·80	28	
·9624	·9613	·0011	1·448	27·72	33·60	58·86	29	
·9616	·9605	·0011	1·344	28·20	34·16	59·84	30	
·9697	·9676	·0021	4·980	23·06	28·18	49·38	31	Gave reaction for furfurol.
·9472	·9457	·0015	2·352	36·68	43·78	76·70	32	
·9601	·9594	·0007	1·236	28·91	34·96	61·28	33	
·9506	·9484	·0022	3·332	35·22	42·18	73·90	34	
.9534	·9509	·0025	4·860	34·02	40·86	71·58	35	
·9669	·9660	·0009	0·864	24 38	29·48	51·66	36	Analysis by Mr. Babington.
·9479	·9474	·0005	1·304	35·80	42 78	74·96	37	do do
·9673	·9667	·0006	0·776	23·85	29·12	51·02	38	do do
·9483	·9417	·0066	1·212	38·59	46·20	80·96	39	Analysis by Mr. Tourchot.
·9462	·9420	·0042	0·812	38·12	45·12	79·36	40	do do
·9462	·9411	·0051	0·976	39·08	46·56	81·60	41	do do
·9442	·9407	·0035	1·400	39·31	46·76	82·41	42	do do
·9468	·9453	·0015	1·328	36·85	43·98	77·06	43	do do
·9683	·9674	·0009	0·900	23·25	28·36	49·70	44	
9593	·9583	·0010	1·760	29·68	35·84	62·82	45	
·9658	·9638	·0020	4·116	25·93	31·54	55·28	46	
·9658	·9652	·0006	0·816	25·01	30·42	53·32	47	
·9660	·9631	·0029	5·952	26·38	32·10	56·26	48	

RESULTS of Examination of

TABLE III—

Date of Collection.	Number of Sample.	Quantity Purchased.	Cost.	Name and Address of		Remarks regarding Sample.
				Vendor.	Manufacturer or Furnisher, as given by Vendor.	
1891.			$ cts.			
June 22..	10685	2 bottles	2 00	N. A. Ross, Truro, N.S.	A. C. McDougall & Co., Halifax.	Old Ky. Bourbon. ....
do 23..	10687	2 do ..	1 20	C. L. Rood, Pictou, N.S.	Messrs. Walker, Ontario.	Draught................
do 24..	10689	2 do ..	1 60	W. McDonald, Port Mulgrave, N.S.	A. C. McDougall & Co., Halifax.	do ....
do 25..	10692	2 do ..	1 20	Mrs. C. Ormond, North Sydney, N.S.	O. Mullin & Co., Halifax.	do ....
do 25..	10694	2 do ..	1 20	Thos. Gannon, North Sydney, N.S.	Messrs. Walker, Ontario.	do ....
do 25..	10698	2 do ..	1 60	Mrs. S. O'Neil, Sydney, N.S.	Grace & Gastonquay, Halifax.	do ... .
do 27..	10702	2 do ..	1 75	J. W. Jackson, New Glasgow, N.S.	Kenneth Campbell & Co., Montreal.	Case..... . ...
May 4..	11501	2 do ..	0 90	David Lalonde, Valleyfield.	J. E. Mullin & Co., Montreal.	Draught................
do 5..	11505	2 do ..	0 80	Mrs. Moir, Moir's Hotel, Huntingdon.	Messrs. Walker, Ontario.	do ....
do 11..	11509	2 do ..	0 75	Joseph Levasseur, 35 Hart St., Three Rivers, P.Q.	Not known...........	do ....
do 12..	11515	2 do ..	0 80	Jules Desormier, Notre Dame St., Joliette, P.Q.	N. Quintal fils, Montreal.	Case............. .....
do 13..	11518	2 do ..	0 80	L. Chevrier, St. Jerôme St., St. Jerôme.	....	Blended by the vendor with common whiskey. Draught.
	"K"	2 do ..	......	....	Gooderham & Worts..	....

None of the samples of rye whiskey gave any opalescence on dilution of the alcoholic distillate 1 : 2.

In this table are included four samples of so-called "Bourbon" whiskey, viz: Nos. 9975, 9981, 10680 and 10685. Of these No. 10680 shewed a very faint opalescence on diluting the distillate 1 : 2. The others behaved like the rye whiskies in this respect.

Samples of Distilled Liquors—*Continued.*

RYE WHISKEY—*Concluded.*

Rusults of Analysis.								
Specific Gravity of Sample at 15·5° C.	Sp. Gr. of Alcoholic Distillate at same Volume and Temp.	Difference.	Fixed Matter—Grammes per Litre.	Alcohol, per cent. by Weight.	Alcohol, per cent. by Volume.	Proof Spirit, p.c.	Serial No.	Remarks.
·9490	·9468	·0022	3·532	36·03	43·08	75·48	49	
·9546	·9534	·0012	1·096	32·58	39·18	68·64	50	
·9625	·9617	·0008	0·968	27·46	33·22	58·22	51	
·9556	·9543	·0013	1·112	32·04	38·56	67·58	52	
·9509	·9505	·0004	0·976	34·25	41 04	71·90	53	
·9636	·9629	·0007	1·128	26·61	32·30	56·28	54	
·9481	·9469	·0012	1 040	35·98	42·98	75·30	55	
·9503	·9490	·0013	1·724	34·97	41·88	73·38	56	
·9572	·9563	·0009	0·908	30·81	37·16	65·12	57	
·9576	·9560	·0016	1·540	30·97	37·36	65·46	58	
·9600	·9597	·0003	0·916	28·73	34·74	60·90	59	
·9561	·9551	·0010	1·520	31·52	37·96	66·52	60	
·9427	·9407	·0020	1·842	39·37	46·76	81·93	61	

RESULTS of Examination of

TABLE IV—

Date of Collection	Number of Sample.	Quantity Purchased.	Cost.	Name and Address of		Remarks regarding Sample.
				Vendor.	Manufacturer or Furnisher, as given by Vendor.	
1891.			$ cts.			
April 22..	9389	2 bottles	1 40	P. Desormiers, 602 Dorchester St., Montreal	N. Quintal fils, Montreal.	Manufactured in Montreal, "Heather Bell' brand.
May 8..	9972	2 qt. bts.	1 50	T. W. Bell, 88 Prince William St., St. John, N.B.	Mackie & Co., Glasgow, S.	Draught..............
do 12..	9979	do .	1 80	Peter Mahoney, 265 Main St., North End, St. John, N.B.	Bullock, Lade & Co., Glasgow, S.	Case. ....
do 20..	9984	do .	2 00	Moncton............	D. Patton, St. John, N.B.	Draught..............
do 22..	9988	do .	2 00	Shediac..............	Grace & Gastonquay, Halifax, N.S.	do ....
do 26..	9991	do .	2 00	Sackville........... .	Street & Co., St. John, N.B.	Brand, Mitchell's "Heather Dew." Draught.
April 9..	10223	3 pints..	1 50	Mr. Armstrong, British Hotel, Simcoe & King Sts., Toronto.	Imported.............	Taken from draught....
do 13..	10233	2 bottles	1 50	J. M. Bennett, Liquor Merchant, Orangeville.	Donald Stuart, Knocklivet, S.	Case..............
do 15..	10245	3 pints..	1 50	P. Creighton, Central Hotel, Oshawa.	Adams & Burns, Toronto.	Taken from draught...
do 17..	10259	do .	1 50	W. J. McHenry & Bro., Liquor Merchants, Brockville.	Bernard & Co., Leith, S.	Case..................
do 23..	10267	do .	1 50	H. Quinn, Liquor Merchant, Rideau St., Ottawa.	Not known...........	do ....
do 23..	10269	2 bottles	1 80	W. Wall, Liquor Merchant, Rideau St., Ottawa.	J. B. Sherriff, Scotland	"Sherriff's Islay." Case.
June 9..	10678	3 pints..	1 13	Thos. Doyle, Halifax..	John Tobin & Co., Halifax.	Taken from draught.....
do 23..	10688	2 bottles	1 40	C. L. Rood, Pictou, N.S	Hirker, Green & Co .	Case................
do 24..	10691	do ..	2 00	John Stapleton, Port Hawkesbury, N.S.	Thom & Cameron, Glasgow, Scot.	do ....
do 25..	10693	do ..	1 60	Mrs. E. Burke, North Sydney, N.S.	Grace & Gastonquay, Halifax.	Draught..............
do 25..	10695	do ..	1 80	Josh. Gannon, North Sydney.	A. McDougall & Co., Halifax.	do ....
do 26..	10699	do ..	2 00	John D. McLean, Antigonish, N.S.	Grace & Gastonquay, Halifax.	do ....
do 26..	10701	do ..	2 00	John McInnis, Antigonish.	Thom & Cameron, Glasgow, Scot.	Case.................
do 27..	10704	do ..	2 00	Hugh Murray, New Glasgow, N.S.	A. McDougall & Co., Halifax.	Draught.............
May 11..	11511	do ..	1 80	G. Cloutier, Notre Dame St., Three Rivers, P.Q.	Not known..........	Bought in Montreal. Draught.
....	D.	....	......	Bate & Co., Ottawa...	— McLaren, Perth, Ont.	Case.................
....	.: .	....	Artificial..........		....	....

Samples of Distilled Liquors—*Continued.*

SCOTCH WHISKEY.

Results of Analysis.										
Specific Gravity of Sample at 15·5°C.	Sp. Gr. of Alcoholic Distillate at same Volume and Temp.	Difference.	Fixed Matter in Grammes per Litre.	Alcohol, per cent. by Weight.	Alcohol, per cent. by Volume.	Proof Spirit, p.c.	Opalescence on Diluting Distillate, 1 : 2 Vols.	Furfurol Reaction.	Serial Number.	Remarks.
·9536	·9520	·0016	0·280	33 39	40 12	70·28	Slight	Faint...	1	Lowest solids.
·9306	·9287	·0019	0·824	45·26	52·92	92·74	Distinct.	Very distinct.	2	
·9414	·9411	·0003	0·904	39·27	46·56	81·60	Slight	Distinct	3	
·9331	·9306	·0025	1·428	44·39	52·08	91·14	None	Very distinct	4	Analysis by Mr. Babington.
·9089	·9080	·0009	0·600	54·41	62·30	109·18	Slight	Distinct	5	Highest alcohol strength. (*See* 9991 and 11511.)
·9090	·9082	·0008	0·564	54·40	62·30	109·18	None	Faint...	6	Highest alcohol strength. (*See* 9988 and 11511.) Analysis by Mr. Babington.
·9382	·9381	·0001	0·394	40·77	48·16	84·39	do .	do ..	7	
·9411	·9407	·0004	0·292	39·44	46·76	81·96	Slight	do ..	8	
·9378	·9377	·0001	0·422	40·94	48·36	84·76	Distinct	Distinct	9	
·9437	·9423	·0014	0·928	38·55	45·84	80·32	Slight	Faint...	10	
·9368	·9362	·0006	0·760	41·65	49·16	86·14	do .	do ..	11	
·9374	·9362	·0012	1·700	41·62	49 16	86·14	Distinct.	Distinct	12	Highest solids.
·9337	·9335	·0002	0·588	43·02	50·54	88·58	Slight	Faint...	13	
·9532	·9525	·0007	0·672	33·16	39·82	69·80	do .	do ..	14	
·9544	·9532	·0012	0 548	32·74	39·36	69·00	Distinct.	Very faint.	15	Lowest alcohol strength.
·9130	·9116	·0014	0·596	52·78	60·70	106·38	Slight	Faint...	16	
·9503	·9491	·0012	0·800	34·89	41·78	73·20	do .	Distinct	17	
·9243	·9237	·0006	0·884	47·45	55·28	96·84	do .	Very distinct.	18	
·9414	·9407	·0007	1·464	39·43	46·76	81·96	Distinct.	Faint...	19	Furfurol reaction uncertain, as quantity available was too small.
·9535	·9526	·0009	0·544	33·08	39·74	69·64	do .	Distinct	20	
·9089	·9080	·0009	0·400	54·41	62·30	109·18	Slight	Faint...	21	Highest alcohol strength. (See 9988 and 9991.)
·9183	·9164	·0019	0·545	50·68	58·62	102·74	Distinct.	Distinct	22	
·9327	·9324	·0003	3·670	41·84	51·14	89·62	None.	None...	23	Analysis by Mr. Babington.

RESULTS of Examination of

TABLE V—

Date of Collection	No. of Sample.	Quantity Purchased.	Cost.	Name and Address of Vendor.	Name and Address of Manufacturer or Furnisher, as given by Vendor.	Remarks regarding Sample.
1891.			$ cts.			
May 9..	9973	2 qt. bts.	1 60	Joseph Fonseca, 259 Prince William St., St. John. N.B.	D. Patton, St. John, N.B.	Draught ....
do 12..	9980	do .	1 60	Thomas Kyffin, 541 Main St., North End, St. John, N.B.	do do . ..	Bottled by Vendor......
do 20..	9986	do .	2 50	A dealer in Moncton, N.B.	Kelly & Glassie, Halifax, N.S.	Imported...... ... .
do 26..	9992	do .	2 00	A dealer in Sackville, N.B.	Street & Co., St. John, N.B.	Imported, "Burke's.' Case.
April 9..	10224	3 pints..	1 80	Alex. Wood, Red Lion Hotel, King St. W., Toronto.	Jamieson, Dublin. ...	Taken from draught....
do 13..	10232	2 bottles (3 pints)	2 20	J. M. Bennett, Liquor Merchant, Orangeville, Ont.	Wm. Jamieson & Co., Dublin.	Case........... ......
do 15..	10246	do .	1 25	Simpson, & Read, Liquor Merchants, Port Hope, Ont.	Dunville, Belfast, I....	do ....
do 16.	10249	do .	1 80	S. Hovey, Liquor Merchant, Trenton, Ont.	Imported.......... ..	"Banagher Brand." Case
do 18..	10260	do .	2 00	H. F. Fitzsimmons & Bros., Liquor Merchants, Brockville.	Imported from Dublin.	Case ....
do 22..	10265	do .	2 00	F. Satchell, London Chop House, Ottawa	Roe & Co., Dublin, I..	do ....
....	.....	....	......	Artificial............	.. ..	....

Samples of Distilled Liquors—*Continued.*

IRISH WHISKEY.

Results of Analysis.										
Specific Gravity of Sample at 15·5°C.	Sp. Gr. of Alcoholic Distillate at same Volume and Temp.	Difference.	Fixed Matter Dry at 100°C—Grammes per Litre.	Alcohol, per cent. by Weight.	Alcohol, per cent. by Volume.	Proof Spirit, p.c.	Opalescence on Diluting Distillate, 1 ; 2 Vols.	Furfurol Reaction.	Serial Number.	Remarks.
·9489	·9480	·0009	1·344	35·45	42·38	74·26	Slight	Distinct	1	Analysis by Mr. Babington.
·9656	·9617	·0039	10 308	27·31	33·22	58·22	None.	Faint. .	2	Lowest alcohol and highest solid residue.
·9362	·9359	·0003	0·980	41·86	49·36	86·50	Slight	Distinct	3	
·9415	·9414	·0001	0·536	39·10	46·38	81·28	do .	do .	4	Analysis by Mr. Babington. Lowest solids. (See 10232.)
·9391	·9388	·0003	1·180	40·38	47·76	83·70	None.	Faint. . .	5	
·9378	·9374	·0004	0·536	41·10	48·56	85·09	Slight	Distinct	6	Lowest solids. (See 9992.)
·9391	·9385	·0006	0·768	40·54	47·96	84·06	None.	Faint . .	7	
·9350	·9343	·0007	0·996	42·58	50·14	87·87	do .	Distinct	8	Highest content in alcohol.
·9355	·9351	·0004	0·924	42·21	49·76	87·20	Distinct.	do .	9	
·9378	·9377	·0001	0·628	40·94	48·36	84·76	do .	do .	10	
·9327	·9326	·0001	3·056	43·44	51·04	89·45	None.	None. . .	11	Analysis by Mr. Babington.

RESULTS of Examination of

TABLE VI—

Date of Collection	Number of Sample.	Quantity Purchased.	Cost.	Name and Address of Vendor.	Name and Address of Manufacturer or Furnisher, as given by Vendor.	Remarks regarding Sample.
1891.			$ cts.			
April 8..	9354	2 bottles	0 75	Alfred Lafleur, Lachute, P.Q.	Gooderham & Worts, Toronto.	Draught
do 8..	9355	do	0 70	Moïse Paquet, Lachute, P.Q.	Not known	Blended by vendor.
do 9..	9357	do	0 80	C. Rouleau, Langevin, St., Hull, P.Q.	H. N. Bate & Sons, Ottawa.	Draught
do 9..	9361	do	0 60	F. Barrette, 44 Wellington St., Hull, P.Q.	do	do
do 15..	9364	do	0 70	Mrs. J. Flibotte, Cascade St., St. Hyacinthe, P.Q.	Pagnuelo Frères, St. Hyacinthe.	do
do 15..	9365	do	0 80	C. Ledoux, St. Simon St., St. Hyacinthe.	O. Brodeur, St. Hyacinthe.	do
do 16..	9368	do	0 76	H. O. Fortier, 30 Bridge St., Sherbrooke.	G. P. Wiser & Son, Prescott.	Blended by vendor. Draught.
do 17..	9374	do	0 60	Geo. Lemelin, St Joseph St., Quebec.	do	Bottled by vendor
do 17..	9378	do	1 00	Mrs. J. A. Quinn, Champlain Market Place, Quebec.	M. Thibadeau, Quebec.	Blended by vendor with water. Draught.
do 17..	9379	do	0 80	Joseph Demers, Champlain Market Place, Quebec.	do	Draught. Blended by vendor.
do 22..	9381	do	0 52	Marcel Lemieux, 1660 Ontario St., Montreal.	L. Chaput fils	
do 22..	9383	do	0 50	A. St. André, 488 Lagauchitière St., Montreal.	M. Rodrique & Co., Montreal.	
April 28..	9393	2 bottles	0 60	Francis Longtin, 3611 Notre Dame St., St. Henri.	C. Lacaille & Co., Montreal.	Draught
May 2..	9397	do	0 60	W. Armstrong, 3540 Notre Dame St. Henri de Montréal.	Thos. Lamb, Chaboliez Square, Montreal.	do
April 9..	10222	do	0 80	W. H. Maxwell, liquor merchant, 105 Queen St. W., Toronto.	Uncertain	Case
do 10..	10227	do	0 80	J. M. Thompson, liquor merchant, cor. York and Adelaide Sts., Toronto.	Compounded by J. J. Dutton, late same address as vendor.	do
do 10..	10228	do	2 00	W. H. Minns, Avondale Hotel, Simcoe and Wellington Sts., Toronto.	J. E. Seagram, Waterloo, Ont.	White wheat whiskey. Case.
do 13..	10235	3 pints..	1 00	R. W. Tuck, Royal Hotel, Shelburne.	Gooderham & Worts..	Draught
do 14..	10239	2 bottles 3 pints	1 00	T. Macomb, liquor merchant, Brampton	do	Case.
do 15..	10243	3 pints.	1 00	M. Finigan, American Hotel, Oshawa, Ont.	do	Draught
do 16..	10251	do	1 00	T. H. Vannalton, Windsor House, Trenton, Ont.	Walker & Sons, Walkerville.	do

Samples of Distilled Liquors—*Continued.*

WHITE WHISKEY.

Results of Analysis.								Remarks.
Specific Gravity of Sample at 15·5° C.	Sp. Gr. of Alcoholic Distillate at same Volume and Temp.	Difference.	Fixed Matter—Grammes per Litre.	Alcohol, per cent. by Weight.	Alcohol, per cent. by Volume.	Proof Spirit, p.c.	Serial Number.	
·9570	·9563	·0007	0·074	30·81	37·16	65·10	1	
·9637	·9631	·0006	0·064	26·45	32·10	56·27	2	
·9581	·9548	·0033	6·692	31·62	38·16	66·93	3	
·9510	·9498	·0012	0·222	34·57	41·42	72·59	4	
·9532	·9523	·0009	0·112	33·25	39·92	69·96	5	
·9606	·9600	·0006	0·212	28·53	34·52	60·52	6	
·9356	·9347	·0009	0·172	42·39	49·96	87·54	7	Highest alcohol.
·9578	·9573	·0005	0·092	30·26	36·50	63·98	8	
·9523	·9518	·0005	0·068	33·58	40·30	70·62	9	
·9560	·9551	·0009	0·096	31·53	37·96	66·52	10	
·9647	·9645	·0002	0·080	25·50	30·98	54·30	11	
·9680	·9669	·0011	1·552	23·65	28·84	50·56	12	
·9620	·9617	·0003	0·124	27·41	33·22	58·22	13	
·9615	·9612	·0003	0·104	27·74	33.60	58·86	14	
·9572	·9566	·0006	0·136	30·65	36·96	64·77	15	
·9698	·9691	·0007	0·236	22·00	26·86	47·07	16	
·9473	·9466	·0007	0·394	36·17	43·18	75·70	17	
·9515	·9509	·0006	0·362	34·09	40·86	71·60	18	
·9547	·9523	·0024	3·592	33·19	39·92	69·97	19	
·9505	·9491	·0014	1·626	34·26	41·78	73·23	20	
·9615	·9570	·0045	10·904	30·33	36·72	64·32	21	Probably intended for rye whiskey.

RESULTS of Examination of

TABLE VI—

Date of Collection	Number of Sample.	Quantity Purchased.	Cost.	Name and Address of Vendor.	Name and Address of Manufacturer or Furnisher, as given by Vendor.	Remarks regarding Sample.
1891.			$ cts.			
do 17..	10254	do .	1 20	J. McParland, liquor merchant, Kingston, Ont.	Stewart & Co., Scotland.	do ....
do 13..	10483	do .	0 80	Charles Spooner, Clinton, Ont.	Randal & Rouse, Berlin, Ont.	do ....
do 14..	10484	do .	1 00	James Scott, Woodstock, Ont.	Messrs. Walker, Windsor, Ont.	Megnolia whiskey. Draught.
do 15..	10490	do .	0 80	Nicholas Brady, Norwich, Ont.	J. S. Hamilton, Brantford, Ont.	Draught.. ....
do 16..	10493	do .	1 00	Byron W. Powers, Simcoe, Ont.	John Sutton, Simcoe..	do ....
do 17..	10499	do .	1 00	Donald McCrea, Glencoe.	John Scanditt, London, Ont.	Sold to vendor as Walkers pure malt. Draught.
do 18..	10502	do .	1 20	Robt. McLean, Lucan, Ont.	E. B. Smith, London, Ont.	Draught.. ....
May 4..	11502	....	0 70	L. Gendron, Nicolson St., St. Henri, Que.	Huden & Hebert, Montreal.	do ....
do 5..	11506	....	0 80	J. C. McMillan, Grand Central Hotel, Huntingdon.	Gooderham & Worts..	do ....
do 11..	11510	....	0 70	Louis Bergeron, 14 Badeau St., Three Rivers, Que.	Louis Brunel, frères, Three Rivers.	do .. ..
do 12..	11513	....	0 70	Nazaire Leblanc, Notre Dame St., St. Joliette	F. Rivet, Joliette....	do ....
do 13..	11516	......	0 70	Joseph Campeau, St. Jérôme St., St. Jérôme.	P. Simard, St. Jérôme.	do ....

NOTE,—None of these samples gave any opalescence on dilution of the alcoholic distillate 1 to 2, except No. 10254.

Samples of Distilled Liquors—*Continued.*

WHITE WHISKEY—*Concluded.*

Results of Analysis.								Remarks.
Specific Gravity of Samples at 15.5° C.	Sp. Gr. of Alcoholic Distillate at same Volume and Temp.	Difference.	Fixed Matter—Grammes per Litre.	Alcohol, per cent. by Weight.	Alcohol, per cent. by Volume.	Proof Spirit, p.c.	Serial Number.	
·9406	·9392	·0014	3·082	40·15	47·56	83·36	22	Probably intended for Scotch whiskey.
·9480	·9473	·0007	0·220	35·83	42·78	74·96	23	
·9566	·9551	·0015	1·300	31·51	37·96	66·52	24	
·9485	·9478	·0007	0·708	35·60	42·58	74·60	25	
·9635	·9631	·0004	0·188	26·44	32·10	56·26	26	
·9530	·9512	·0018	0·136	33·84	40·66	71·26	27	
·9506	·9466	·0040	0·736	38·49	43·18	75·66	28	
·9648	·9647	·0001	0·120	25·34	30·80	53·98	29	
·9599	·9600	·0001	0·148	28·55	34·52	60·52	30	
·9657	·9654	·0003	0·076	24·85	30·24	52·98	31	
·9556	·9547	·0009	0·040	31·76	38·26	67·00	32	
·9696	·9695	·0001	0·090	21·68	26·48	46·42	33	Lowest alcohol.

RESULTS of Examination of

TABLE VII—

Date of Collection	No. of Sample.	Quantity Purchased.	Cost.	Name and Address.		Remarks regarding Sample.
				Vendor.	Manufacturer or Furnisher, as given by Vendor.	
1891.			$ cts.			
April 8..	9356	2 bottles	1 50	James Curry, Lachute, P.Q.	J. De Kuyper & Co., Rotterdam, Holland.	Taken from draught....
do 9..	9358	do ..	1 00	M. G. Laverdure, 58 Albert St., Hull, P.Q.	Blankenheljm & Nolet, Rotterdam.	do ....
do 17..	9373	do ..	0 80	G. W. Pelletier, 62 St. Joseph St., Quebec.	C. Melchers, Schiedam	do ....
do 22..	9385	do ..	1 20	P. Monnette, 10 William St., Montreal.	DeKuyper, Rotterdam.	do ....
do 28..	9392	do ..	1 00	A. Branchaud, 3663 Notre Dame St., St. Henri.	do ..	do ....
May 9..	9974	do ..	1 25	T. E. Moran, 2 Britain St., St. John, N.B.	M. Moran, St. John...	do ....
do 26..	9994	do ..	1 50	Sackville, N.B........	Blankenheljm & Nolet, Rotterdam, Holland.	Case..............
April 1..	10240	do ..	1 60	T. Macomb, Liquor Merchant, Brampton. Ont.	R. H. Howard, Toronto	do ....
do 17..	10255	do ..	1 50	T. Farrell, Liquor Merchant, Kingston.	Imported, J. & J. Nolet	do ....
do 22..	10264	do ..	0 80	P. O'Connor, Bank St., Ottawa.	Blankenheljm & Nolet, Rotterdam.	do ....
do 15..	10491	3 pints..	1 25	C. Drake, Norwich, Ont.	Randal & Roos, Berlin, Ont.	Draught..............
do 17..	10497	do ..	1 50	R. R. McKellar, Glencoe, Ont.	E. B. Smith, London, Ont.	Shipped from London, Eng. Draught De-Kuyper.
June 8..	10676	do ..	1 05	John P. Cahill, Halifax, N.S.	Kelly & Glassie, Halifax.	"Henkes," from draught
do 25..	10696	2 bottles	1 30	John Smith, North Sydney, N.S.	A. McDougall & Co., Halifax.	Draught.............
....	E	....	....	....	J. DeKuyper..........	Case...............
....	F	....	....	....	do	do ....
....	...	....	....	....	....	Artificial............

TABLE VIII—

April 14 .	10485	3 pints..	1 50	Nesbit Bros., Woodstock, Ont.	Finlayson & Hirsch, Montreal.	Draught...............
....	G.	....	.....	....	Booth...	Bought of Bate & Co., Ottawa. Case liquor.
....	H.	....	.....	....	Boord & Son.........	Case................
....	.....	....	.....	....	....	Artificial..............

Samples of Distilled Liquors—*Continued.*

HOLLANDS GIN.

Results of Analysis.									
Specific Gravity of Sample at 15·5° C.	Sp. Gr. of Alcoholic Distillate at same Volume and Temp.	Difference.	Fixed Matter—Grammes per Litre.	Alcohol, per cent. by Weight.	Alcohol, per cent. by Volume.	Proof Spirit, p.c.	Opalescence on Diluting Distillate, 1:2 Vols.	Serial Number.	Remarks.
·9263	·9259	·0004	0·220	46·49	54·26	95·05	Distinct	1	No furfurol.
·9248	·9233	·0015	0·948	47·67	55·48	97·19	Slight ..	2	Distinct furfurol reaction. Highest residue.
·9482	·9473	·0009	0·130	35·82	42·78	74·96	Distinct	3	No furfurol.
·9296	·9280	·0016	0·108	45·51	53·26	93·38	Faint...	4	do
·9227	·9220	·0007	0 232	48·25	56·08	98·28	Distinct	5	do
·9456	·9441	.0015	0·238	37·55	44·72	78·26	do ..	6	Faint furfurol reaction.
·9462	·9450	·0012	0·172	37·06	44·18	77·42	Slight ..	7	Distinct furfurol reaction.
·9421	·9410	·0011	0·046	39·24	46·56	81·60	Distinct	8	do
·9465	·9457	·0008	0·102	36·71	43·73	76·70	do ..	9	do
·9373	·9366	·0007	0·106	41·46	48·96	85·80	do ..	10	do
9209	9192	·0017	0·176	49·44	57·36	100·50	do ..	11	Highest alcohol. Distinct furfurol reaction
·9272	·9255	·0017	0·156	46·62	54·44	95·40	do ..	12	Distinct furfurol reaction.
·9499	·9484	·0015	0·288	35·25	42·18	73·90	do ..	13	Lowest alcohol. Not tested for furfurol.
·9255	·9245	·0010	0·342	47·09	54·88	96·20	do ..	14	No furfurol.
·9421	·9417	·0004	0·002	38·94	46·20	80·96	do ..	15	Distinct furfurol reaction.
·9393	....	......	....	.....	......	......	....	16	Analysis by Mr. Tourchot. Distinct furfurol reaction.
·9341	·9340	·0001	2·928	42·78	50·34	88·24	None...	17	No furfurol. Analysis by Mr. Babington.

OLD TOM GIN.

Specific Gravity of Sample at 15·5° C.	Sp. Gr. of Alcoholic Distillate at same Volume and Temp.	Difference.	Fixed Matter—Grammes per Litre.	Alcohol, per cent. by Weight.	Alcohol, per cent. by Volume.	Proof Spirit, p.c.	Opalescence on Diluting Distillate, 1:2 Vols.	Serial Number.	Remarks.
·9617	·9505	·0112	28·620	33·87	41·04	71 90	None...	1	
9522	·9414	·0108	29·076	38·66	46·38	81·28	Slight ..	2	Analysis by Mr. Lefebvre.
·9547	·9450	·0097	12·924	36·73	44.18	77·42	None...	3	do Mr. Tourchot.
·9307	·9303	·0004	2·756	44·48	52·17	91·42	do ..	4	do Mr. Babington.

LABORATORY OF THE INLAND REVENUE DEPARTMENT,
OTTAWA, 30th September, 1891.

T. MACFARLANE, Esq., F.R.S.C., &c.,
Chief Analyst.

SIR,—I beg herewith to hand you my report upon samples of liquors collected in April and May of this year. These are classified as below :—

	Samples.
Brandy	24
Rum	13
Rye whiskey	61
Scotch do	22
Irish do	10
White do	33
Hollands gin	16
Old Tom do	3
Total	182

In addition to these, 6 samples of artificial liquors have been prepared (according to formulas published by vendors of flavouring essences) and submitted to analysis, and much experimental work has been done for the purpose of enabling an interpretation to be put upon the figures obtained in analysis. Owing to the prolonged absence (through illness) of Mr. Lefebvre nearly the whole of the work has been done by myself. Any exceptions are credited duly in their proper places.

1. *Original Gravity.*—This has been taken by means of the specific gravity-bottle (Geissler's pattern), and great care has been given to ensure, not only accuracy in weighing, but that the bottle should be filled exactly at 15·5° C. In carefully distilled liquors which have been kept in glass or metal vessels the original gravity should (using Hehners or other alcohol tables) give a very close approximation to the actual content of alcohol. When solid matter in solution is present the gravity will be correspondingly raised, and the spirit indication will be less than the truth, since these tables are constructed for mixtures of alcohol and water only. An examination of the numbers found will show that in some cases the difference between proof spirit indicated by the gravity and that actually present amounts to 5 or 6 per cent.

TABLE showing the effect of Solid Matter in solution in lowering the apparent Spirit strength by the Hydrometer.

Sample.		Per cent. Proof Spirit, Corresponding to Gravity.	True Strength (proof spirit) p. c.	Difference.	Residue (Grammes per Litre).
Brandy	No. 8..	87·02	92·54	5·52	16·784
Rum	" 2..	118·77	122·58	3·81	11·904
Rye whiskey	" 22..	69·29	73·92	4·63	12·244
Scotch whiskey	" 4..	88·97	91·14	2·17	1·428
Irish whiskey	" 2..	52·64	58·22	5·58	10·308
Whiskey	" 19..	67·05	69·97	2·92	3·592
Holland gin	" 2..	95·96	97·19	1·23	0·948
Old Tom gin	" 1..	58·24	71·90	13·66	28·620

Solids may be present from their (1) having mechanically passed over the goose-neck in distillation, (2) from having gone into solution as a result of the action of the liquor upon the material of the cask or other vessel in which it was stored, (3) from legitimate addition, as in rye whiskey, or in the manufacture of a liqueur, or (4) from fraudulent addition, for the purpose of giving colour, flavour or body to an artificial brandy or rum, etc.

2. *Spirit Gravity.*—By this term I would indicate the gravity which the liquor would have if it contained no other substances than alcohol and water. In order to obtain the spirit gravity I have proceeded as follows:—A measured volume of the liquor (usually 250 cc.) is taken, and to it, in the distilling flask, is added nearly an equal volume of distilled water. The mixture is now slowly distilled until not more than from 50 cc. to 75 cc. remains in the flask. The distilling flask is provided with a fractioning tube, and the receiver is closed by a funnel tube, containing glass beads kept wet with distilled water. The distillate so obtained is made up to twice the volume of liquor taken at first, *i.e.*, to 500 cc. in most cases, and this is done at the same temperature at which the original measurement was made. From the specific gravity of the distillate the spirit gravity is obtained thus: From the alcohol tables is taken the volume per cent. of alcohol corresponding to the specific gravity of the distillate found. This volume per cent is multiplied by two (2) and opposite to a number in the volume per cent column, identical with the number so obtained, will be found the spirit gravity.

I find that with such apparatus as I have described above it is not practicable to distil over the whole of the alcohol from a liquor of nearly proof strength without dilution. Even on diluting to nearly two volumes the whole of the alcohol is not contained in the first portion of the distillate corresponding to the volume of liquor taken; *e.g.*, on distilling 500cc. reduced grain spirit, after adding 350cc. distilled water, the first 500cc. of distillate contained only 47·36 per cent of alcohol, as against 48·05 per cent contained in the liquid distilled. On distilling such a mixture until 750cc. came over, diluting to 1 litre and calculating from the gravity of this distillate the whole of the alcohol was accounted for.

The specific gravity is given to four decimal places. Numerous duplications have proved that strict accuracy to three places can always be obtained on careful working. The same figure in the fourth place is not always obtained, but the average error does not exceed 0·0003, corresponding approximately to two tenths of 1 per cent. of alcohol by weight.

3. The alcohol by weight contained in the sample operated on is obtained from the gravity of the distillate (to double volume) by use of the following formula:—

$$\frac{\text{Sp. grav. dist.} \times \text{corresponding alc. p.c. from tables} \times 2}{\text{original gravity.}} = \text{alc. p.c. by weight in sample}$$

or, if S=Specific grav. of distillate.

w=Corresponding alcohol p.c. by weight, from table.

G=Original gravity.

W=Alcohol percentage by weight required.

Then $\text{Log. } W = \text{Log. } S + \text{Log. } (2 \times w) - \text{Log. } G.$

The content in alcohol percentage by volume and in proof spirit are of course obtained by doubling the numbers found in the alcohol tables opposite the specfic gravity of the distillate to double volume.

4. *Residue, dry at 100° C.*—The residual liquid contained in the distilling flask (and representing usually 250cc. of the liquor worked on) is transferred to a porcelain dish, and, with the washings of the flask, concentrated on the steam bath to a volume of about 10cc. This is poured into an asbestos-filled tube (like those described by Mr. Maefarlane, Trans. Roy. Soc. Can., 1887, Sec. III, p. 33) previously dried to constant weight at 100° C. The tube with its contents is returned to the drying oven, and allowed to remain at 100° C, until no furthur weight is lost. This usually requires, in the case of rye whiskies and brandies, from 36 to 48 hours.

The residue (which in the foregoing tables is stated in grammes per litre) bears, in a very general way, an intelligible ratio to the difference between the original gravity and the spirit gravity. In order that this correspondence should be strictly constant it would be necessary (1) that the solid matter present in the liquors should be of the same kind, (2) that the alcoholic strength of the liquors should be uniform. The second condition is very far from being fulfilled in the case of any kind of liquor examined. The extremes will be seen in the following table:

Kind of liquor.	No. of Samples.	Alcohol p. c. by weight.		
		Highest.	Lowest.	Difference.
Brandy	24	51·10	27·51	23·59
Rum	13	68·50	29·48	39·12
Rye whiskey	61	42·76	22·77	19·99
Scotch do	22	54·41	32·74	21·67
Irish do	10	42·58	27·31	15·27
Whiskey	33	42·39	21·68	20·71
Holland's gin	16	49·44	35·25	14·19
Old Tom gin	3	38·66	33·87	4·79

The first condition is equally unfulfilled, since even samples of liquor of the same name give residues of very various kinds. In the case of Canadian rye whiskey the solid matter added to the same brand by the same manufacturer might be expected to be constant in kind and in amount, and would thus become a means of indentifying the genuine liquor from an imitation.

5. Any volatile oils present in a liquor are carried over with the vapour of alcohol, and are therefore found in the alcoholic distillate. Such oils are, as a rule, insoluble in water, and nearly insoluble in very dilute alcohol. In consequence of this, when water is added to the distillate, so that its volume is double that of the liquor distilled, the oils are largely thrown out of solution, and the emulsion so produced becomes decidedly opalescent, even if they are present in but very minute quantity. In genuine brandy, distilled from wine or marc, such oils are necessarily present, as also in rum, in Scotch and Irish whiskies and in Hollands gin. Grain spirit, well rectified as by the patent stills, is practically free from these oils, and gives no opalescence on dilution with water. As rye whiskey is generally made from such spirit, as also much of the liquor sold as white whiskey, we find no opalescence on diluting the distillate from these liquors. The following synopsis shows the behaviour of the samples analyzed in this respect:—

Kind of Liquor.	OPALESCENCE.			Total Samples.
	Distinct.	Slight.	None.	
Brandy	4	11	9	24
Rum	7	5	1	13
Rye whsikey	....	1	60	61
Scotch do	7	12	3	22
Irish do	2	4	4	10
White do	1	....	32	33
Hollands gin	13	3	....	16
Old Tom gin	....	1	2	3

The sample of white whiskey which gave opalescence on diluting is believed to be a Scotch whiskey, although not sold as such. The rye whiskies include four samples of so-called Kentucky Bourbon, and it was one of these which gave the faint opalescence referred to in the table above. Six samples of artificial liquors were prepared in the laboratory from patent still spirit and essences sold for flavouring purposes. These samples included one each of brandy, rum, Scotch and Irish whiskey, Hollands gin and Old Tom gin. None of the distillates from them gave any opalescence on diluting with water.

It is not unlikely that in cases where the opalescence produced is very slight the liquor is essentially an imitation article, to which a proportion of genuine liquor has been added—since in every case in which a high degree of certainty exists as to the origin of a pot-still liquor a very decided opalescence has been found on treatment as above.

6. The presence of furfurol in alcohol is believed to be due to the charring of portions of the malt (or other material used) during the process of distillation. (M. L. Lindet—Bull. de la Société Chimique de Paris, tome V, p. 20).

In patent stills, where steam heat only is used, this charring of the contents of the still does not take place, and in the spirit produced furfurol is not found. The ageing of the spirit, which causes changes in the nature of most of the secondary constituents of spirits, does not apparently affect the furfurol, which is present as largely in old as in new pot-still whiskies. (Evidence of A. H. Allen before the Select Committee on Spirits appointed by the British House of Commons, 1891).

The test liquid for furfurol I have prepared as follows :—

Aniline (re-distilled)	1 vol.
Acetic acid (glacial)	1 "
Distilled water	2 "

When 1cc. of this liquid is added to 50 cc. of the liquor to be tested, contained in a Nessler glass, an intense reddish colour is imparted, when as much as 0·01 of 1 per cent of furfurol is present ; and a distinct colouration is produced in presence of one-tenth of that amount. On account of the tint possessed by most liquors it is necessary to make the comparison with an equal depth of the sample contained in a second test glass.

I believe that it would be possible to make the operation quantitative, provided that the liquors operated on were first decolourized by animal charcoal or other means, but I have not attempted to use the test quantitatively further than by noting the intensity of the colouration as *distinct*, *faint* or *none*.

Kind of Liquor.	Furfurol Reaction.			Total.
	Distinct.	Faint.	None.	
Brandy	13	11	....	24
Rum	3	9	1	13
Rye whiskey	1	....	60	61
Scotch do	9	10	....	19
Irish do	5	3	....	8
White do	1	....	32	33
Hollands gin	9	2	5	16
Old Tom do	....	....	3	3

7. The residue in the flask from which the alcohol distillation was made (*see* sec. 2) has in every case been examined for odour of amyl alcohol or other characteristic indication of fusel oil ; but in no case has such indication been found.

8. The alcoholic distillate, after having been used to obtain the specific gravity, has been submitted to a rapid distillation, and in the first 150cc. taken off (from the total 500cc.) search has been made for acetone, as a means of detecting the presence of wood naphtha—should the liquor have been made in whole or in part from methylated spirit. In no case has any trace of acetone been found. The sensitiveness of the test used (known as Reynold's test—*see* Allan's Com. Org. Analysis, vol. 1, p. 50) has been amply confirmed by experimental researches conducted by me in September, 1887.

In November, 1887, I examined the following samples of liquor for methylated spirit, using the acetone test. It was at that time required by regulation of the Inland Revenue Department that wood naphtha intended for methylating purposes should contain 25 per cent of acetone. No acetone was found in any of the samples examined :

Rye whiskey, Nos. 1031, 2431, 2741, 3244, 3245, 3246, 5755, 5757, 5760, 7228, 7238—11 samples.

White whiskey, Nos. 1032, 2428, 2528, 2529, 2933, 2936, 5761, 6580, 6532, 6534, 6536, 6843, 6844, 7220, 7222, 7224, 7225, 7234, 7236—19 samples.

Old tom gin, Nos. 1028, 1030, 2633, 3771, 5753, 5754, 5756, 5758—8 samples.

Hollands gin, Nos. 1025, 2429, 2430, 2432, 2525, 2636, 2743, 2744, 2934, 2935, 2937, 3242, 3243, 3247, 3773, 5752, 5759, 5749, 6538, 6540, 6542, 6544, 6546, 6548, 6550, 6552, 6845, 6846, 6847, 7025, 7028, 7029, 7030, 7223, 7226, 7227, 7230, 7231, 7232, 7240, 7241, 7242, 7243, 7244, 7245, 7216—46 samples.

RESUMÉ.

Rye whiskey	11	samples
White whiskey	19	do
Tom gin	8	do
Hollands gin	46	do
Total	84	do

9. Of the other substances mentioned in the schedule appended to the Adulteration Act of 1886, none have been detected in any of the samples analyzed, although search has been made for all of them (not excluded by the nature of the liquor examined).

So far as special cases seemed to demand investigation, Cannabis Indica (Indian Hemp), Cocculus Indicus (picrotoxin), Capsicum (cayenne pepper), and Lolium tementulum (darnel), which are added to liquors to increase their intoxicating power, need only be looked for in such samples as are deficient in alcohol. In such samples they have been sought, but in no instance has any evidence of their presence been obtained.

Brandy.—Twenty-four samples sold under this name have been analyzed. Eleven of this number are draught liquors, the remainder being so-called case liquors, and claim to be sold as imported. The variation in alcoholic content will be seen in the following table:—

—	Alcohol per cent.					
	Maximum.		Minimum.		Mean.	
	Weight.	Volume.	Weight.	Volume.	Weight.	Volume.
13 case liquors	51·10	59·16	30·51	36·84	41·26	48·77
11 draught liquors	48·22	56·36	27·51	33·40	39·61	46·95

If brandy be identical with *eau de vie* distilled from wine, the ethers necessarily present in it will cause a distillate from it to become at least slightly turbid and opalescent on dilution with water to double the volume of the liquor operated on. In this respect the following results have been obtained:—

—	Opalescence on Diluting the Distillate one Volume to two Volumes.		
	Distinct.	Slight.	None.
13 case liquors	3	5	5
11 draught liquors	1	6	4

This shows at least a slight opalescence in 62 per cent of the case liquors and in 64 per cent of the draught liquors. A distinct opalescence, however, was obtained in 23 per cent of the former and in only 9 per cent of the latter. I have always obtained opalescence in any sample of brandy which I had specially good reason to believe a genuine *eau de vie* from wine. An artificial brandy made from patent still spirit with flavouring essences as furnished to the trade for compounder's use gave no opalescence. This "brandy" was made from the following formula:—

Alcohol (about 10 below proof)	1,600 cc.
Brandy, essence	1 cc.
Glycerine	5 cc.
Brandy colouring	6 cc.

It is evident that the intensity of the opalescence may be reduced either by addition of patent-still spirit to a genuine brandy, or by using a very inferior grape or wine in the production of the genuine article.

Eight of the 13 case liquors give distinct furfurol reaction, and 5 of the 11 draught liquors show furfurol distinctly present. In every one of the brandies at least traces of furfurol are found, proving that they consist at least in part of pot-still spirit.

The fixed matter show the following variations:—

—	Fixed Matter (Grammes per Litre.)		
	Maximum.	Minimum.	Mean.
13 case liquors	16·784	0·952	8·850
11 draught liquors	17·924	2·504	8·679

Owing to the absence of any standard it is quite impossible to classify these so-called brandies as adulterated or as genuine. That such extremes should be found in genuine brandy as are exemplified among these samples, whether we consider spirit strength, solid residue, volatile ethers or furfurol, seems very unlikely, and should, if recognized in the trade, cause the prices to vary as greatly as the quality. With reference to the nature of the solid residue, Mr. Babington made an examination of it in the case of 4 samples of brandy, with the following results:—

—	Grammes per Litre.			
	Champagne Cognac—B.	Draught Liquor, 9360.	Jules Robins' Brandy, 10247.	E. Dumas Cognac, 10256.
Total residue	7·373	2·097	4·196	0·405
Insoluble in water	·070	·000	·005	·000
Soluble in water	7·303	2·097	4·191	0·405
Cane sugar	?	0·650	1·683	?
Invert sugar	4·576	1.674	3·638	0·212
Precipitate with acid, soluble in alkali	Heavy.	Slight.	Slight.	Slight.

NOTE.—Where the cane sugar is questioned the cuprous oxide obtained after inversion was less or equal to that obtained directly.—F.W.B.

Rum.—Thirteen samples collected as rum have been examined, in addition to which a sample of artificial rum has been prepared and analyzed. The high total solids from this sample consist chiefly of caramel, added to give the necessary depth of colour, and glycerine. The following formula was used in preparing it:—

Alcohol (about 30 below proof)	1,600 cc.
Rum essence	2 cc.
Rum colouring	2·5 cc.
Glycerine	10·0 cc.

The variations of alcohol strength are given in Table II.

	P. c.	P. c.
Highest alcohol strength	68·60 (wgt.) =	75·80 (vol.)
Lowest do do	29·48 do =	35·62 do
Mean do do	46·22 do =	53·67 do

The total solids, dry at 100° C., are stated in grammes per litre:—

Highest	11·904
Lowest	2·160
Mean	4·997

All but one of the samples gave at least a slight opalescence on diluting the alcoholic distillate to double volume. In this respect the sample in question (No. 10250) resembled the artificial rum prepared in the laboratory. This sample is the only one which does not give at least a faint indication of the presence of furfurol.

It is remarkable that some of these samples (*e.g.*, 10675 and 10690) which are suspicious on account of their low content in alcohol, nevertheless give a distinct opalescence on diluting the distillate. This may be due to the fact that they are genuine rums, merely reduced by the addition of water; or that genuine rum, or some of its characteristic volatile oil, has been purposely added. This is the more likely since, with a single exception, all the samples show at least traces of furfurol.

Beaudrimont (Dictionnaire des Alterations et Falsifications des Substances Alimentaires, p 1055) says true rum is solely the product distilled from fermented molasses of the sugar cane. The name *tafia* is given to the liquid distilled from fermented sugar cane juice, although this last is generally sold in France under the name of rum.

Genuine rum should contain 50 to 65 per cent (volume) of alcohol, the mean accepted strength being 52 per cent. If this mean strength were adopted, 6 out of the 13 samples, or over 46 per cent. would be condemned as too low in alcohol.

Rye Whiskey.—There have been 61 samples of rye whiskey analyzed, but in this number are included 4 samples of so-called Bourbon whiskey. One of these (No. 10680) gave a slight opalescence on diluting the alcoholic distillate due to separation of ethers, but all the other samples, with a single exception, appear to be made from patent still spirit only. The exception is No. 10266, which gave a distinct reaction for furfurol, implying a blend with pot-still spirit. The highest alcohol content (No. 9975) is 50·34 (volume per cent), and the lowest (No. 10220) is 27·80.

The highest residue is found in No. 10230, being 12·244 grammes per litre, and the lowest in No. 10234, being 0·308 grammes per litre. There is no apparent consistency in this respect even among whiskeys which are stated to be made by the same manufacturer. The following, for example, are stated to be made by Messrs. Gooderham & Worts, Toronto:—

Serial No.	Alcohol % (Vol.)	Residue.
18	41·98	1·492
20	38·78	2·004
23	41·22	0·308
27	39·74	1·600
32	43·78	2·352
61	46·76	1·842
Mean	42·04	1·599

Qualitative examination of a number of residues obtained from rye whiskey showed them to consist chiefly of glucose, cane-sugar, tannin, glycerine and resinous matters. The total amount of residue available was not large enough to permit accurate quantitative separations.

The following examination of the solid residue in a few of the samples was made by Mr. Babington :—

—	Grammes per Litre.							
No	9359	10220	10226	10229	10230	10234	10236	10242
Total residue	·237	·341	·501	·225	3·061	·077	·235	·254
Insoluble residue	·028	·010	·002	·013	·018	·005	·018	·001
Soluble residue	·209	·231	·499	·212	3·043	·072	217	·253
Cane sugar	·006	·015	·049	·017	1 53	.....	·006	·006
As invert sugar	·022	·041	·216	·056	2·48	.....	·044	·070
Precipitated by hydrochloric acid soluble in alkali	.....	.....	Ppt.	Ppt.	Ppt.	Ppt.	Ppt.	Ppt.
Difference between gravities	·0015	·0010	·0006	·0008	·0045	·0015	·0010	·0011
Residue, grammes per litre	0·948	0·964	2·004	0·900	12·244	0·308	0·940	1·016

It appears that where the residue is high, as in 10230, the invert sugar found bears a high ratio to the total weight of the soluble residue. In other cases the invert sugar found is low. Sweetness may be given to the liquor, in such instances, by glycerine, or other substitute for sugar; and there can be little doubt that many of the liquors sold as rye whiskey contain added glycerine. In order to determine the probable loss on drying a glycerine residue in asbestos at 100° C., the following experiments were made :—

Experiments made by Mr. Tourchot.	Loss of Weight at 100° C. (Per centages).		
	15 hours.	21 hours.	40 hours.
Experiment 1	2·49	2·49	4·54
do 2	3·41	3·54	5·46
	6 hours.	17 hours.	
do 3	5·48	6·76	
do 4	6·60	7·94	
do 5	4·92	5·96	

The same sample of glycerine was used in all these experiments.

Experiment 1—2·291 grammes glycerine added to dry asbestos tube, and exposed in water oven to temperature of 100°C.

do 2—2·345 grammes glycerine as above.

do 3—2·026 do do

do 4—2·180 do do

do 5—Five grammes glycerine dissolved in 250cc. alcohol of sp. gravity 0·9512, concentrated on the water bath, and finally dried in asbestos tube.

From these experiments it appears that glycerine loses in weight at 100°C. when exposed to dry air in asbestos tubes; that the weight lost depends upon the time of exposure, but is variable between 3 and 5 per cent., for reasons not made apparent by these experiments. The loss of weight is not increased either in rapidity or in amount by dissolving in alcohol and evaporating with the alcohol.

The addition of any solid matter to alcohol causes an increase in the density, and a consequent apparent reduction in alcoholic strength as indicated by the hydrometer. It is not unlikely that glycerine may be added instead of sugar, in order that the acquired degree of sweetness may be obtained without so great apparent reduction of alcoholic strength. In order to obtain some trustworthy data on the subject of the difference in gravity produced by addition of glycerine and sugar respectively to dilute alcohol, I caused the following experiments to be made :—

—	Specific Gravity at 15·5° C.	Corresponding Alcohol (from Hehner's Tables.)		Weight of Residue. — Grammes per Litre.	Alcoholic strength by Distillation. — p.c. by Wgt.
		Weight.	Volume.		
Expt. 1	·9489	35·05	41·90	0·096	34·94
do 2	·9510	34·05	40·79	5·008	35·03
do 3	·9504	34·33	41·11	4·800	35·05
do 4	·9334	43·05	50·62	....	
do 5	·9388	40·40	47·78	18·720	
do 6	·9420	38·78	46·02	28·268	
do 7	·9414	39·10	46·37	19·996	
do 8	·9458	36·67	43·69	29·640	

Expt. 1—Mr. Babington.—Commercial grain spirit, No. 1 quality, diluted with distilled water.
do 2 do Dilute alcohol as above, prepared with 5 grammes cane sugar per litre. The residue due to sugar is (5.008—0·096) =4·912, instead of 5 grammes added, showing 1·76 per cent moisture in the sugar.
do 3 do Alcohol as above, with addition of 5 grammes glycerine per litre. The residue due to glycerine was (4·800—0·096) = 4·704, instead of 5 grammes. Loss of 5·92 per cent glycerine in drying.
do 4—Mr. Tourchot.—Grain spirit diluted with distilled water.
do 5 do Above diluted alcohol with 20 grammes glycerine per litre. A loss of 1·280 in the glycerine is 6·40 per cent.
do 6 do As in No. 5, but 30 grammes glycerine per litre added. A loss of 1·732 in glycerine is 5·77 per cent.
do 7 do As in No. 5, but 20 grammes cane sugar per litre added.
do 8 do As in No. 5, but 30 grammes sugar added. This lost in drying 1·2 per cent of weight.

These results confirm those given in the preceding table, showing that glycerine cannot be dried in asbestos without loss of about 5 per cent of its weight. They further show that while the addition of 0·5 per cent of sugar reduces the apparent alcoholic strength by about 1·11 per cent. (volume), the addition of the same weight of glycerine reduces the apparent strength only 0·79 per cent; also, while 2 and 3 per cent sugar added reduced the apparent alcohol strength by 4·25 and 6·93 per cent (volume) respectively, the addition of the same weights of glycerine reduced the apparent strength by 2·84 and 4·60 per cent. In the absence of any recognized standard as to alcohol strength for rye whiskey it is, of course, impossible to pronounce as to the genuineness of any of these samples. None of them have been found to contain anything that could be considered injurious to health. It cannot be denied that certain of them could be selected as much better value than others for the price put upon them by the vendors, if the alcohol content were taken as the basis of valuation.

Scotch Whiskies.—These whiskies claim, I believe, to be produced by distillation of malted grain, or a mixture of malted and unmalted grain, in pot-stills. They are characterized when new by the very large amount of so-called "empyreumatic oils" which they contain. The new or raw spirit, being quite unfit for use, is aged in wooden vessels, and in the course of time, through the changes which take place, the oils are oxidized or otherwise converted into products which give the characteristic bouquet or flavour to these whiskies.

Of the 22 samples analyzed, 7 are case liquors and 13 draught liquors. In two instances I am uncertain whether the samples are from draught or not. Nine samples claim to be imported. The highest content in alcohol (62·30 per cent volume) is found in samples that do not claim to be imported. The lowest alcohol content is found in one (No. 10691), which claims to be imported as a case liquor, made by Thom & Cameron, of Glasgow. The only other sample claiming to be made by Thom & Cameron (No. 10701) gives very different results on analysis. In only 5 samples does the alcohol (volume) fall below 45 per cent, and 3 of these claim to be imported liquors. All of the samples give the furfurol reaction, but in ten only is it distinct. Of these, three claim to be imported. It would appear, therefore, that much of what is sold as imported Scotch whiskey is greatly diluted with patent-still spirit.

The solid residue found in these whiskies varies from 1·7 (No. 10269) to 0·280 (No. 9389) grammes per litre. It is remarkable that the solids found in this class of liquors bear a less constant ratio to the difference between original and spirit gravity than in brandy or rye whiskey. This may be to some extent due to the nature of the residue, which, at least in the genuine samples, is not a foreign addition to the liquor. The artificial sample was made as follows :—

Alcohol (about 10 below proof)	1,600cc.
Scotch whiskey essence	1cc.
Glycerine	5cc.

It is not a good imitation of the genuine article.

Irish Whiskey.—This is supposed to be, to a large extent, a pot-still product from malt and grain. Of the ten samples analyzed, only 2 fell below 45 per cent (volume) of alcohol. The highest percentage is 50·14 and the lowest is 33·22. Four of the samples fail to give any opalescence on diluting the distillate, and 3 of these claim to be imported, including No. 10249, which contains the highest spirit percentage found. All give the furfurol reaction, and 7 give it distinctly. There is something very abnormal about No. 9980. The total solids found is entirely exceptional, and the spirit strength is at the same time very low. The artificial sample referred to was made as follows:—

Alcohol (about 10 below proof)	1,600cc.
Irish whiskey essence	1cc.
Glycerine	5cc.

It is not a good imitation of the genuine Irish whiskies.

White Whiskey.—Under this heading I have tabulated samples sold under the name white whiskey, together with such samples of whiskey as were not specified as "rye," "Scotch," "Irish" or "Bourbon." Many were sold simply as "whiskey," others as "malt whiskey." The total number is 33. Two samples are included which would more correctly, judging from the results of analysis, have come under other headings. These are serial numbers 21 and 22, the first of which is undoubtedly intended for a "rye" whiskey and the second for a "Scotch whiskey." These whiskies exhibit a very great disparity in alcohol strength, varying from 49·96 per cent. (volume) in No. 7, to 26·48 per cent. in No. 33. There can be little doubt that many of them, in the very low solids they contain and the total absence of any characteristic flavour, show that they are merely made by reducing grain (or silent) spirit by addition of water. Where the solids amount to a few tenths of a gramme per litre they may be introduced in solution in the water used for dilution. None of the samples (except 10254) give any opalescence on dilution, or any reaction for furfurol.

Hollands Gin.—Fifteen samples have been fully examined and a sixteenth sample has been partly analyzed by Mr. Tourchot. Of the 6 "case" samples of gin, all gave a distinct reaction for furfurol. Three of the "draught" samples gave this reaction distinctly, but 5 contained no furfurol, and 1 (No. 9974) gave the reaction but faintly. An artificial gin, made with essence and silent spirit reduced, gave no reaction for furfurol. It would therefore appear that genuine Hollands contains furfurol, and, by inference, such samples of gin as do not give the reaction are probably factitious, and made from silent spirit, by addition of essence of juniper. Seven of the samples approximate very closely to proof strength. The highest content in alcohol is 57·36 per cent (volume)—*i.e.*, one-half per cent over proof. The lowest in alcohol is No. 10676, containing 42·18 per cent alcohol by volume, or about 26 under proof strength. All of them give opalescence on dilution, but in 3 of them the opalescence is but slight. A genuine Hollands gin should give no residue on drying at 100° C, other than that due to matter dissolved from the cask or vessel in which it has been stored. In the case of the artificial gin the residue found is chiefly glycerine, the sample being made from the following formula:—

Alcohol (about 10 below proof)	1,600c.
Hollands' gin essence	1c.
Glycerine	4c.

The highest residue found in any of the regularly collected samples is less than 1 gramme per litre; and with the exceptions of No. 9358, in which it reaches 0·948 grammes, and No. 10696 in which it is 0·342, gramme per litre, the amount is practically insignificant, as far as suggesting the intentional addition of solid matter. Even in the cases excepted, it is not impossible that the solids found may be derived from the cask. It will be noticed that the highest residues are always found in the draught samples.

Old Tom Gin.—This seems to be essentially a sweetened gin, containing oil of juniper and sugar. None of the samples gave any reaction for furfurol, and I interpret this to mean that they are manufactured from patent still spirits. These gins seem to bear the same relation to Hollands that rye whiskey bears to Scotch or Irish pot-still whiskey. The residue in Booth's gin amounts to about 29 grammes per litre, or nearly 3 per cent. It consists almost wholly of sugar. A draught gin, No. 10485, imitates Booth's gin pretty closely, except in spirit strength. The sample made in the laboratory from the following formula:—

Alcohol (about 10 below proof)	1,600c.
Old Tom Gin Essence	1c.
Glycerine	5c.

gives a very low residue as compared with the other samples. The presence of so much sugar in solution greatly lowers the apparent alcohol strength. In No. 10485, for example, the strength indicated by the original gravity is only 33·23 per cent (volume), while the true strength is 41·04 per cent.

I have the honour to be, Sir,
Your obedient servant,
A. McGILL,
Assistant Analyst.

3 2044 106 511 314